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final report
Evaluation of NAL Full Text Databases

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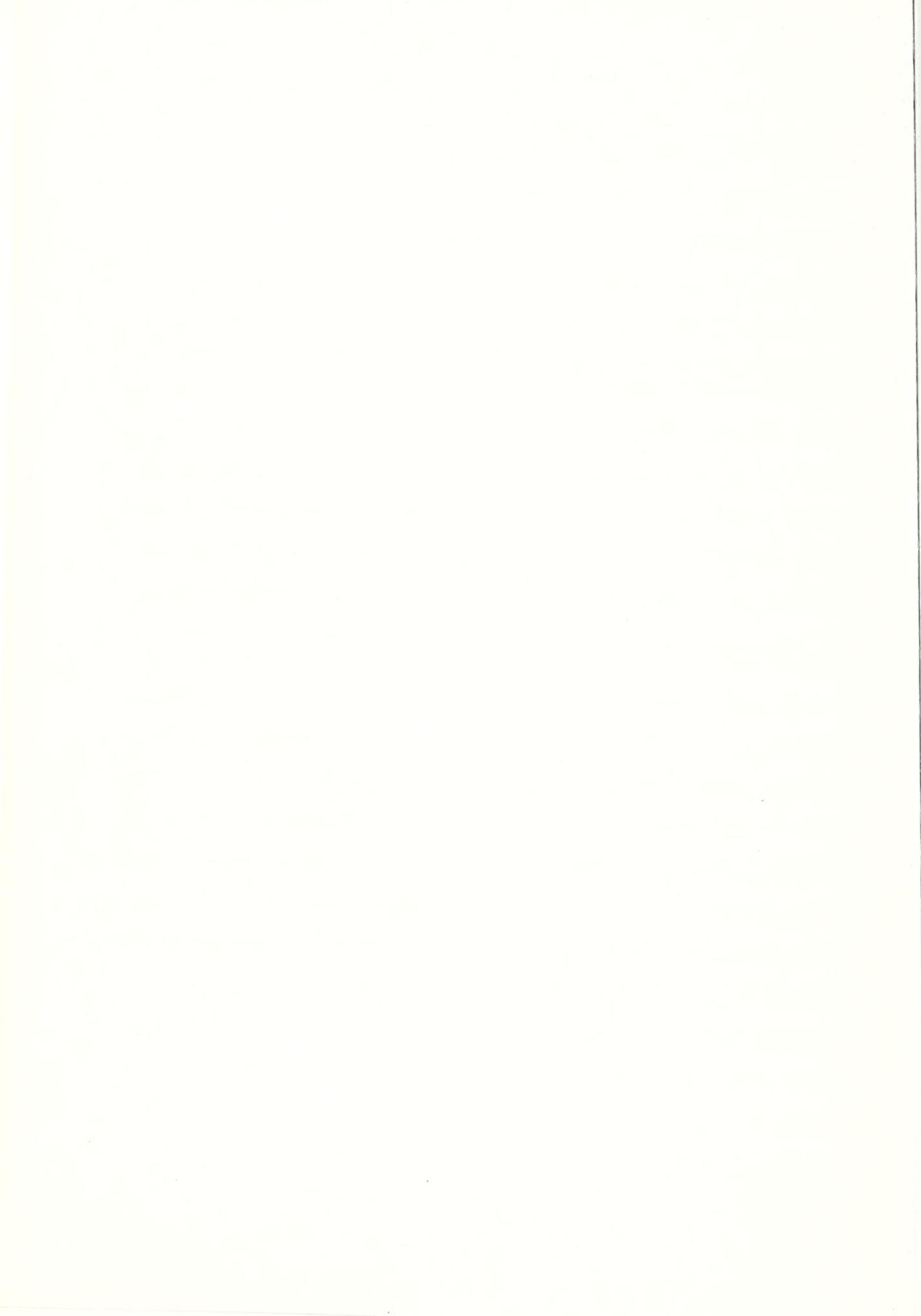
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1. Introduction

During 1986 and 1987, Purdue University investigated techniques of translating text files, prepared for various word processing systems, into formats suitable for inclusion in an electronic, full-text database. The work was performed under a cooperative agreement with the National Agricultural Library.

The technology of optical disc data storage has made possible the creation of compact libraries, filled with text, drawings, and photographs. Information contained in these libraries can be retrieved through computer techniques, making the process rapid, efficient, and effective. However, the process of transferring volumes of printed information to electronic storage is neither simple nor inexpensive.

One method of transferring text to electronic form is to rekey it. Rekeying of information is time consuming, labor intensive, and subject to human error. Another method of transfer is to photograph entire pages of text and store them as visual images on the optical disc. Although this should be relatively rapid, a system which used photographic storage would require that the monitor used for display be of extremely high resolution. While this problem could be solved with a relatively minor increase in the cost of the retrieval system, a more fundamental defect of a purely photographic system remains. Such a system would not inherently provide a method for indexing of text. Thus information retrieval would be no easier than that available through more traditional microfilm or microfiche systems.



Since most new publications exist at some time in the production process as electronic text (e.g. word processor - phototypesetter sources), another possibility is to transliterate these electronic sources, creating a format suitable for display on a computer terminal screen. This transliteration is not, however, a straight-forward task.

This report discusses some of the difficulties encountered in the transliteration process and offers some suggestions which might be employed to make a transliteration system more effective.

1.1 Scope

This project was designed to translate six documents from the original electronic form in which they had been prepared into a form suitable for display on a micro-computer screen. Documents translated were:

1. The National Corn Handbook,
2. The Extension Goat Handbook,
3. Soil Taxonomy Guide,
4. Agricultural Fact Book,
5. The Wood Handbook,
6. The Woodland Workbook.

The primary tasks were to:

1. Translate text into a character set of printable ASCII characters.



2. Remove formatting codes unique to the word processing or typesetting system on which the document was originally prepared.
3. Insert codes necessary for searching the documents using the BRS full-text information retrieval algorithms.
4. Perform editing necessary to fit the presentation to computer screens.

While performing the work, attempts were made to standardize computer tools so as to make the tasks progressively more automatic.

1.2 Constraints of the Computer Terminal Screen

The fact that text was intended for display on a microcomputer screen immediately introduces constraints not imposed on the authors, editors, and design artists who produced the original documents. This limitation is discussed in more detail later in this report. Primarily, it was assumed that display of the finished document would be on a standard "dumb" computer terminal. This implies:

1. A maximum of 80 characters per line. Character sets are not of proportional size so that a 1 to 1 mapping of type to screen is seldom satisfactory
2. Screen height is made up of 21 text lines. Information passages which exceed this limit may be partially lost in retrieval since the top portion of the passage may "scroll" off the screen.



3. Only one character font is available. No italic or bold face type can be used, resulting in the loss of emphasis present in the original document.
4. Only one type size is available, resulting in the loss of a standard means of text differentiation.
5. The terminal's cursor is not addressable i.e., the text must be displayed line for line from the top of the screen to the bottom. Underlining and half-line spacing are impossible, and non-linear placement of text is difficult.

1.3 Results

Eventually, each of the six documents was translated into a format suitable for electronic database inclusion. Although a completely automated system for doing this was not generated, however, the amount of time necessary for completing a document was greatly reduced, as experience was gained.

The following steps were used in the transliteration process:

1. The electronic form of the document (e.g. floppy disc, tape) was loaded onto the host computer. (A DEC VAX/780 operating under the UNIX* system).

* Unix is a registered trademark of Bell Laboratories



2. Any change of file format or character set was accomplished at that time.
3. Codes required by the text-handling system on which the document was first prepared were analyzed.
4. A Unix utility, LEX, was used to generate a program which would change these format codes through a process of string substitution. Often, BRS codes could be inserted at this time.
5. The resulting file was passed through a short program to make sure that all text lines would fit within the boundaries of the computer terminal screen.
6. The resulting transliterated file was edited to resolve ambiguities and make any changes requested.

The amount of time required in each step was different. If the document was provided in magnetic tape, transfer to the host system and file formatting was accomplished in a matter of minutes. Transfer time was longer, involving a few hours, when the document was provided on floppy disc.

After those working on the project became more familiar with the operation of the LEX program and the theory of embedded format codes, preparation, compilation, and use of that program required several hours and usually less than one day. Line length repair required only a matter of minutes.



The final edit, done by hand, and the hand processing of tables and equations was more time consuming than the other tasks combined and, depending on the complexity of the document, required from one to two weeks.

The Woodland Workbook, last of the documents translated, required a total of two weeks to complete. Two persons, working more or less full-time, did most of the editing after the basic programs were run. This document, a series of Extension circulars, contains about 130,000 words and about 50 tables. One could expect that two good typists, familiar with BRS format and skilled on a word-processor system, could have rekeyed the Woodland Workbook, including tables, in a similar amount of time. However, proof reading would have needed to be thorough and might have consumed another week to two weeks for two persons. Even with proof reading would probably be more chance of error in rekeying than in transliteration.

2. Background

The one fundamental conclusion reached in the project is this:

Problems in translating text source files are less involved with the mechanics of transliteration than with the difficulty of representing typeset copy on a dumb computer terminal screen.

We were unable to find a functional relationship which perfectly maps typeset text to ASCII display on a screen. Some of the reasons for this are suggested by the following discussion.



2.1 Computer Typesetting

Word processing systems may be either "one pass", "two pass", or some combination. One pass word processors produce an analog of final output on the computer screen. Formatting is done at the time of entry or editing, with the possible exception of pass-through codes intended to control an output device such as a printer. (e.g. a printer control string to produce bold face type). With these exceptions, control codes do not appear on the screen. They may, however, be embedded in text source code, either on the unused upper bit in an eight-bit system or as a separate byte, carried with each character in a 16-bit system. One-pass word processors have traditionally been used for producing typewritten documents. They have not been used as entry mechanisms for typesetting. However, the advent of certain desktop publishing systems makes the preparation of typeset-like copy analogous to the one-pass system.

Formatting codes carried in this way make text source files difficult to interpret unless the code set for the particular word processor is known, a situation which is not the case in many proprietary word processors. It is usually possible to mask this format information, a process which makes the character stream readable but may make the text difficult to handle.

Fortunately, most word processors provide the opportunity for processing text and writing it to another file. If this can be done, format codes are removed and the text is at least fairly easy to handle, although



information which might have been useful for inserting database codes is often missing.

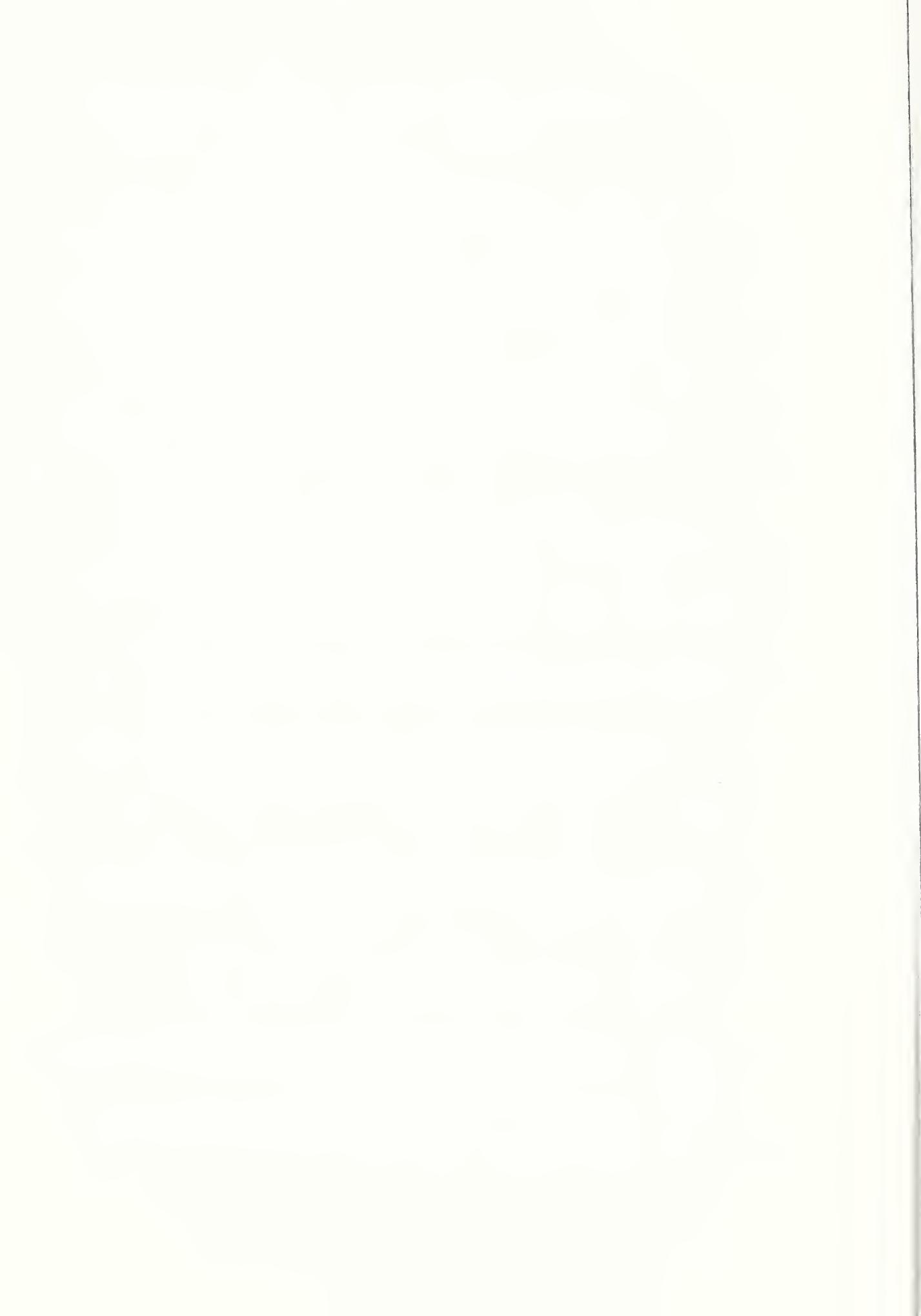
Two pass word processing systems utilize the insertion of some unique structure to specify format (e.g. a control code or escape sequence or a line beginning with a character such as a "." a sequence introduced with a character such as a "\"). These format codes are usually (but not always) defined for the user. As a result, they can be redefined at processing not only to produce proper formatting but to insert database code.

When word-processing output has been produced primarily for printer (typewriter) output, the translation is simpler than when the text has been produced for a photo-typesetter or laser printer.

At the simplest level, a typesetter performs very few actions:

1. It manipulates the output medium (paper, photographic film, etc.) so as to locate a specific position where some symbol is to be placed.
2. It selects a particular character representation (usefully from one of several fonts).
3. It selects a size for that character.
4. It places a copy of the character in the appropriate size from the appropriate font at the selected location.

Typeset or near typeset quality printing is thus position selection,



font selection, character selection, size selection, and reproduction.

In typesetting software, most of the effort is expended in determining position. Most of the design features which determine a typeset layout are involved with font and size changes.

Very sophisticated typesetting software may remove the typist or editor from the mechanics. Thus, a formatting code may be needed only to mark the beginning of a paragraph or specify that a heading is "type 1" or "level 1." Most desktop publishing systems or computerized electronic typesetters, however, operate at a more fundamental level. The user indicates the beginning of a paragraph by entering codes which tell the machine not to justify the end of the preceding paragraph, and either insert some additional leading, indent the beginning of the next line by a certain amount, or do both.

Even more complex is the introduction of emphasis by using italic type (a font change) or changing type size, leading, and font to indicate a headline. Thus a code sequence might be something like:

&l&s14&f004&p15

to indicate nonjustification (flush left) change to size 14 point type on a leading of 15 points and use a font designated "004" to print the type. Unfortunately, in this kind of hypothetical system, any one of the following lines might accomplish the same purpose:

&f004&p15&l&s14
&p115&l&s14&f004
&s14&f004&p15&l



A program designed to recognize a code sequence and convert it to something else must therefor recognize not only the code, put all possible permutations of the code sequence. This creates an apparent ambiguity which makes simple string match and substitution programs complex.

More difficult than the ambiguity, however, is the fact that none of the code structures give any indication of the original author or editor's intent. Those graphical techniques which have been developed to improve the reading ease of typeset copy do not directly translate to the standard ASCII based computer terminal. Specifically, on the typical terminal, font changes and size changes are impossible. Letter spacing is wrong, since terminal character sets are of uniform character width while typeset characters are proportioned. Typesetting techniques such as kerning have no analogue on the conventional terminal.

3. Screen vs Paper

Difficulties in the translation of word processor source files into files intended for viewing as non-proportioned text on a screen, do not arise from the use of incompatible computer systems. Rather, the difficulties are primarily those which arise from translating material which was intended for paper presentation to a format suitable to the microcomputer screen.

The availability of systems to manipulate and display large quantities of text electronically is a relatively new phenomenon. Printing, the



mass reproduction of text on paper, has been available for about 400 years. A doctrine for preparation of text for printing has been promulgated, tested, and modified many times. Printed text produced today bears little relationship to the printed pages which first reproduced the illuminated manuscripts of medieval Europe. In the past 10 to 15 years, there has not been time for development of a comparably rich tradition of preparing information for electronic distribution to develop. So preparing text for the computer screen is currently a matter of mimicking paper appearance on a screen.

Unfortunately, many of the techniques which have been developed to improve readability and comprehension of printed text do not readily translate to the screen. Specifically, variation in typesize and font are difficult if not impossible to achieve on most conventional terminals. Also causing difficulties are modern layout techniques such as the use of sidebars or headlines which repeat segments of the text. difficulties.

This situation presents a problem, not only for the creation and use of text databases, but also for the general use of electronic information systems. It is by no means clear whether the solution will lie in developing systems to faithfully reproduce the printed page on the screen or in developing new methods of information presentation for the screen. There is evidence of interest in each of these techniques, with rather more attention being paid to the former.

One method of redesigning information presentation for the screen is



videotext. High resolution monitors, used in computer aided design and artificial intelligence systems, and terminals in which character generation draws on the techniques of screen graphics, could make it possible to directly accomplish the reproduction of paper on the screen.

The development of powerful page layout languages such as Postscript * required to efficiently drive laser printers, makes possible the use of graphics terminals to display printed text. However, it seems highly likely that the electronic transfer of printing technology to the computer screen may be a rococo solution, substituting ornamentation for the development of an appropriate representational form.

In the long run, if systems are developed to merely reproduce the paper page, it may be simpler to photograph pages and store them as visual images. The electronic version of the text could then be used only for the purpose of generating search keys which would make the information accessible. Such a system would be much easier to convert from the original system since it would only be necessary to mark page boundaries in the original, not worry about screen format.

3.1 Text Preparation

The reproduction of pure text or "body copy" is relatively easy on the screen. Primarily, the tasks are to mark paragraphs and rearrange lines so that computer screen space is used efficiently, and so that

* Postscript is a trademark of Adobe Systems Inc.



characters are not lost in display. Hyphens cause the most difficult problem in translation. Most word-processing systems distinguish between a "hard" or "mandatory" hyphen and a "soft" or "discretionary" hyphen. This distinction is not always easy to decode in a source file, particularly if the eighth bit was used by the original software to mark the "soft" version. When a program is used to reformat word processor source code, one is faced with the task of either eliminating hyphens, which often results in the misprinting of hyphenated words, particularly if they occur at the end of a line, or retaining hyphens, which leads to the inclusion of hyphens where they do not belong. This latter option at least provides the opportunity to drop unnecessary hyphens in a final edit. Most word processing systems offer the opportunity to print final text in a non-hyphenate mode. This option should be used in preparing text for transliteration by another system.

Emphasis, titles, names of ships, foreign phrases, etc. are indicated within text by italic type or, in typewriter copy, by underlining. Neither of these options is particularly useful on the screen. Adding emphasis by changing italicized type to all caps is not a very good solution, since all-caps is not a precise paper to screen analog and so may interfere with reading comprehension.

3.2 Tables, Figures, Equations

Figures and line drawings must be reproduced in electronic databases as photographs. Equations and tables may be reproduced as photographs, but in some cases it will be better to reproduce them as text. Tables



present a particular problem. Most word processing systems have fairly good table processing routines. The table processing algorithms are by no means uniform among systems, however. Handling of a table by a translation routine must, if it is to be accurate, must follow the same logic as the original program. Even if this can be done, however, simple reprocessing may not be adequate. The table was designed for printing on paper. If it was designed for typesetting and if the table became too wide for the space allotted, the compositor may have been able to make it fit by reducing the size of the type in which it was printed. This option, of course, does not exist on the standard computer terminal.

If translators decide to reformat tables (through such techniques as shortening headings, resorting to a scientific notation for long numerical entires, etc.) they run the risk of changing the intended meaning as they do so. Reformatting by hand also, of course, adds considerable time to the transliteration process.

Equations present a different problem. The conventions of printing equations require variation in size of elements of the equation (e.g. superscripts, summation or integration operators) and line spacing of less then a half line. Arbitrary change of an equation (changing a delta to a d in a differential equation for example) may alter the meaning of the equation.

Scientific and engineering equations often contain Greek characters which cannot be easily translated on the screen.



These factors combine to suggest that tables and equations, as well as line drawings and halftones, should probably be routinely included as photographs. Arguing against this, however, is the fact that the systems used on this project do not give very good reproduction of material stored photographically. In a truly operational system, the capability of high resolution graphics display must be provided.

4. The Need for Consistency

When this project was undertaken, it was recognized that input files would not be consistent. Since the various publications to be included in the database had been prepared by different systems, it was clear that character sets, formatting codes, and processing logic would be different in each. Work on the project was complicated, significantly, however, because output specifications were not consistent.

If one created a group to routinely process documents prepared on a variety of word processors, for inclusion in a standard database, it would be hoped that efficiency would increase over time as members of the group learned about the logic of various word processing systems. It would also be hoped that members of the group would be working to a standard database format. Specifically, this standard should include definitions of paragraphs and sections and heading levels, as well as standards for treatment of tables, equations, figure captions, footnotes, and handling of unconventional layout techniques. The importance of working toward a uniform database format can not be overstressed. In addition to improving the efficiency of preparation,



consistency would make the resulting database easier to use.

5. The Purpose of Electronic Databases

How an electronic, full-text database should be organized will depend, finally, on how it is to be used. If the database is to be the primary source for detailed information. that is, if the user is expected to use the electronic version to replace books, then much more attention must be paid to formatting and reading ease. It also becomes much more important to eliminate references to specific paper pages, etc., since these no longer will have meaning.

If, however, the electronic version is intended primarily as a reference, used to extract specific pieces of information or to locate information which will later be pursued in detail in some other fashion, (e.g. obtaining the original document and reading it) then another, entirely different set of standards should apply.

6. Conclusions and Recommendations

Most of the persons at Purdue who worked on this product were not eager to undertake the translation of additional documents. However, they can agree on certain recommendations which would make the entire task smoother and the results more usable.



6.1 Hardware

- Consider implementation of a system which provides higher resolution of photographs. This would make the decision to reproduce tables and equations photographically much simpler.
- Consider making the system compatible with the standard work station being considered under the IIVEN project of Federal Extension. This could lead to greater use of the finished discs.

6.2 Input Files

- Where possible, have input files formatted prior to translation. The task of recognizing display elements (e.g. a paragraph begins with five spaces, a heading is a short line with a blank space above it) is easier than translation of formatting codes.
- Always provide the translating team with a printed copy of the document.
- If possible print the files so that only required hyphens (e.g. in compound words) are included.

6.3 Output

- Develop a standard database format.
- Develop a standard policy for handling layout elements which are not easily translatable to the computer screen.



- Consider offering authors an opportunity to review changes made in text to make it compatible with screen display.



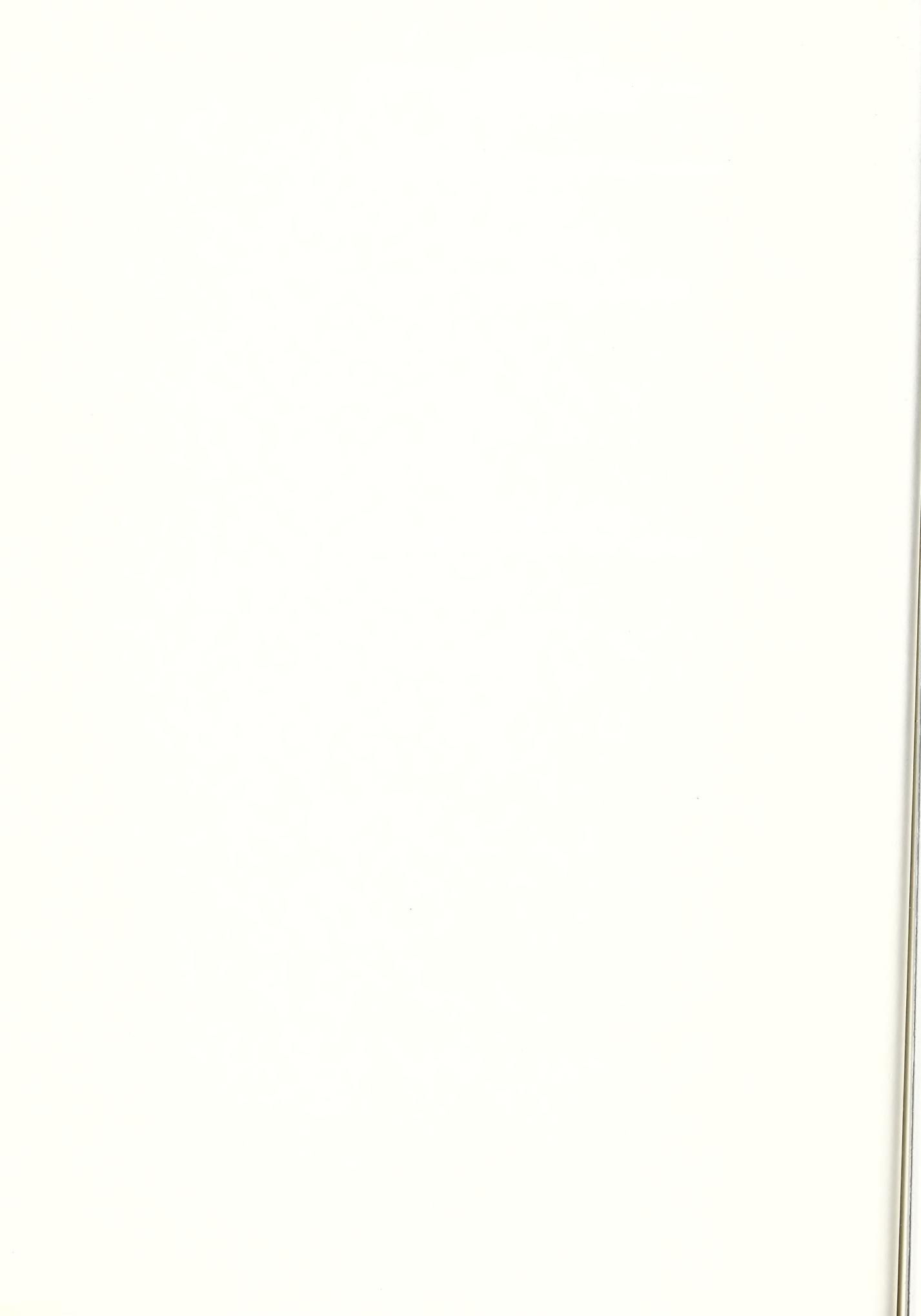
Final Report
Evaluation of Microcomputer Based
Full Text Databases

Cooperative Agreement 58-32u4-4-777

between

Purdue University
and
National Agricultural Library

With Cooperation of
National Pork Producers Association



SUMMARY

This document describes work conducted from October 1985 through May 1986 in evaluating full text databases being considered by the National Agricultural Library. Both an on-line database version and a microcomputer version, stored on laser disc were considered. The Pork Industry handbook was the specific database.



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APPENDICES

Appendix A Source and Text Files BRS Tutorial

Appendix B Sample Questionnaire Laser Disc Users

Appendix C Sample Questionnaire BRS On-Line Users

Appendix D Source Code Electronic Versions of Questionnaires

Appendix E Program to Tally Questionnaires

Appendix F Raw Tallys



1. Introduction

The use of computers for the storage and retrieval of information has become commonplace. However much technical information, useful to clients of the agricultural science and education system, remains available only in printed form.

The cost of converting printed text to a form in which it can be electronically stored and searched is not small. However, if useful information can be made more easily accessible to persons who need it, the investment may be a wise one.

This report covers a study, undertaken by Purdue University at the request of and through the support of the National Agricultural Library, to determine the acceptability of electronic full-text databases as a means of delivering the information contained in a specific technical publication, the Pork Industry Handbook.

This study, based on responses to a questionnaire answered by persons who received training on one of two types of electronic delivery system, concludes that electronic storage and retrieval of full-text information would be acceptable. Respondents preferred an electronic system in all aspects except reading ease.

If electronic information systems were to be financed, in part, by user fees, costs would need to be maintained in the range of \$25 per year following an initial fee of up to \$50, the study determines.

2. Project Tasks

The work undertaken by Purdue involved three parts:

1. Development of a system to help train potential clients in the use of full-text data bases.
2. Development of a survey instrument used to measure the response of persons who used the system to various means of information presentation.
3. Collection of some responses to the survey and analysis of results.

3. Background

The following briefly describes some of the important parts of the project.



3.1 Pork Industry Handbook

The Pork Industry Handbook project is a continuing educational effort intended to provide swine producers and others in the pork industry with up-to-date information on all phases of swine production and marketing. It was initially approved and funded by the Extension Service-USDA. The project is now funded by the State Cooperative Extension Services.

More than 375 authors and reviewers are involved in the production of fact sheets which, collectively make up the Pork Industry Hand Book. About 45 states and/or Cooperative Extension Service units, representing about 99 percent of the swine production in the U.S. are using all or some of the fact sheets published.

Among topics covered are those in the broad areas of

1. Production Systems
2. Breeding and Genetics
3. Reproduction
4. Nutrition
5. Management
6. Housing
7. Waste Management
8. Herd Health
9. Marketing
10. Pork and Pork Quality

Because of its broad availability and familiarity within the pork industry, the Pork Industry Handbook furnished an excellent test document.

3.2 BRS System

The BRS full-text database system is used in numerous libraries as a reference source. The system may involve either direct access to central computers, or software applied to local computer facilities. The searching algorithms are extensive and allow the location of keywords at a variety of search levels from major headings down to inclusion within the text itself.

Since the system primarily transmits information as ASCII screens of computer information, photographs and large charts and tables are not



included in the BRS database.

In order to use the on-line system, potential users must pay a connect fee, a usage fee, and long-distance telephone charges from their home or office. Frequent use could thus be quite expensive.

3.3 Laser Disc

The second electronic system involves the relatively new technology of laser disc. The laser system contains all of the information contained in the BRS system. In addition, photographs and tables are available separately and can be displayed on a computer monitor.

The system tested utilized a micro-computer, running a personal computer version of the Unix* Operating System. The BRS search algorithms were also provided. The laser system did not require telephone connections to the BRS database.

4. On-Line Tutorial

In order to reduce the connect time to the BRS system during training, an on-line tutorial was prepared. This program, written in BASIC under the MS-DOS operating system, was intended to mimic the action of the BRS search algorithms over a small and controlled data set. The program, a listing for which is included as an appendix, allowed users to try out BRS commands without spending resources on long-distance telephone charges. It was intended to relieve first-time users of any fears that they were wasting money while learning to use the system.

No formal evaluation of the tutorial was made. It was, however, used at Purdue in the Life Science Library and at NAL in Washington to aid in training of potential users.

5. The Survey

In order to assess the acceptability of electronic, full text databases, a micro-computer system, capable of accessing either the BRS on-line system or the PIH text stored on Laser disc, was placed in each of three locations. The Life Science Library at Purdue University, West Lafayette, IN; The headquarters of the National Pork Producers Association, Des Moines, IA, and the National Agricultural Library, Washington D.C.

* Unix is a Trademark of AT&T Bell Laboratories.



Users were given training on either the on-line or the laser disc system, then allowed to search for information in the database. At the end of a session, each user was asked to complete a questionnaire, either in electronic or paper format. For those users who elected to complete the questionnaire by paper and pencil, results were transferred to the electronic form by clerical staff.

Questionnaires were of slightly different form for those who used Laser or BRS system. Samples of questionnaires are included as an Appendix

In each case, the electronic version was compared against the printed version of the Pork Industry Handbook. Finally, results were obtained from Purdue and from the National Agricultural Library sites. No results were obtained from the Pork Producers Association. A total of 123 satisfactory questionnaires were completed. Of these 98 users used the laser system and 25 the BRS on-line system.

On the questionnaire, questions 10 through 14 and question 16 asked about the acceptability of the two systems. The other questions were used to evaluate the demographics of the respondents.

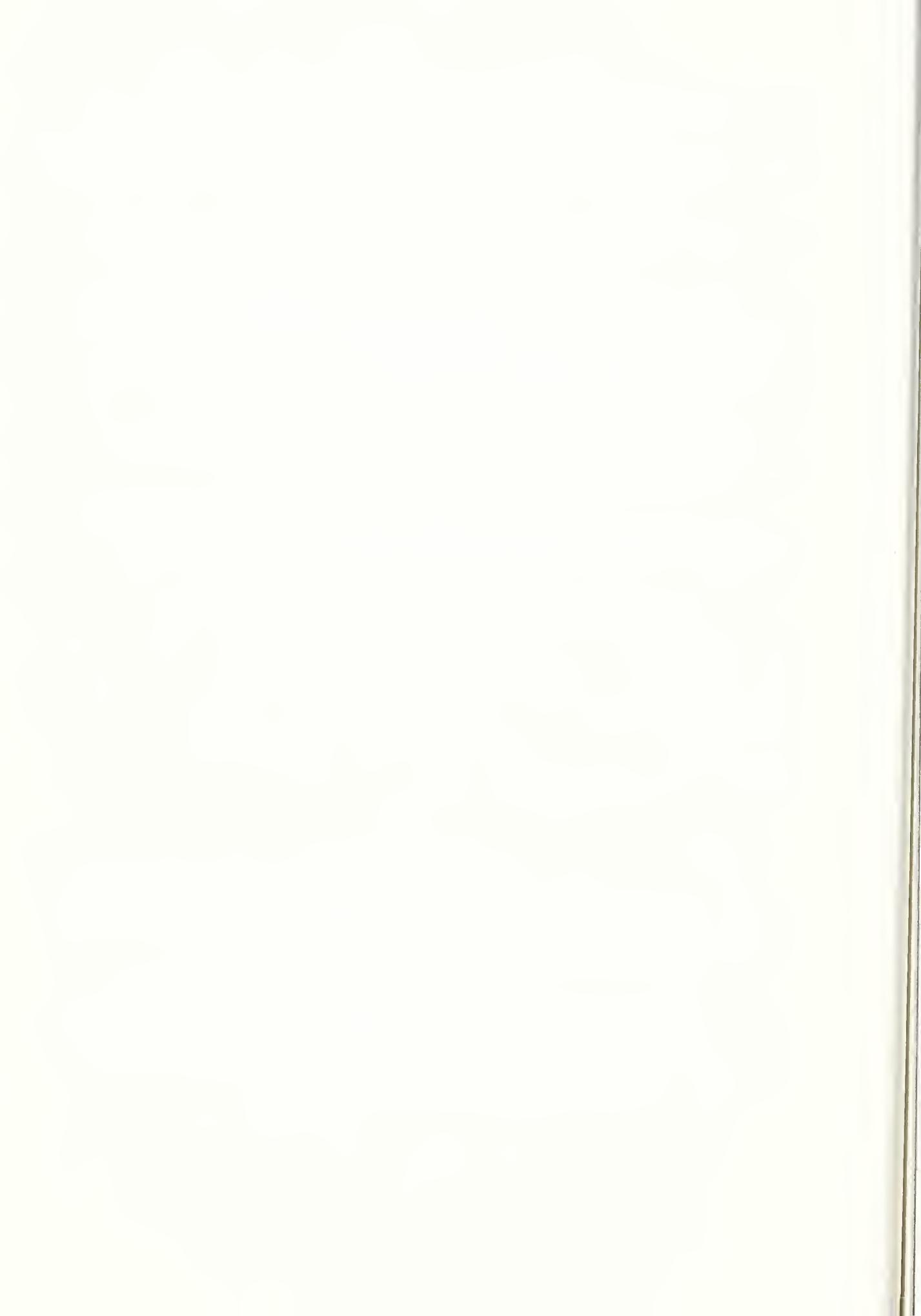
Occupation provided an important breakdown of the group of respondents. Several respondents identified themselves as belonging to more than one occupational category. The breakdown was as follows:

Occupational Group	
Occupation	Number
University staff	36
Federal employee	6
Farmer/producer	28
Private organization	5
Library staff	32
Agribusiness	2
Student	36
Public Information Specialist	14.

6. Results

In order to see if there were differences between respondents who used the laser system and those who used the on-line systems, 2x2 chi-squared statistics were calculated between these groups for questions 10 through 14. No significant differences were found.

For the total group, respondents found the electronic version more convenient to use. They said they would prefer to use the electronic system, that they would likely use it more often, and that they believed they could find information more rapidly using the electronic system. They found the printed text, however, easier to read.



Results are printed in the following tables. For each question, responses are partitioned between those who tried the electronic system and those who tried the on-line system. The total is for all users who answered the questionnaire. The column headed "significance" indicates the confidence level at which the hypothesis that the results do not differ from those obtained by chance is rejected. At the bottom of each 2x2 table, the Phi correlation is presented along with the confidence level at which the hypothesis that there is no difference between groups can be rejected.

Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
BRS	9	14	NS
Laser	35	56	0.050
Total	44	70	0.001

Correlation = 0.006

No significant Difference

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
BRS	3	19	0.001
Laser	13	80	0.001
Total	16	99	0.001

Correlation = -0.004

No significant Difference



If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
BRS	6	17	0.050
Laser	16	79	0.001
Total	22	96	0.001

Correlation = 0.094

No significant Difference

Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
BRS	17	7	0.050
Laser	48	45	NS
Total	65	52	0.001

Correlation = 0.156

No significant Difference

If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
BRS	6	17	0.050
Laser	16	77	0.001
Total	22	94	0.001

Correlation = 0.090

No significant Difference



In order to see if occupational classification were important in determining answers to the questions. Chi-squared tests were done for the subgroups of university staff, library staff, and farmer producers. Results for university staff are presented here. Some significant differences were observed. University staff thought that the paper version was more convenient, although the difference was not significant. They were more convinced that the paper version was easier to read. And they were less certain they would use the electronic version more.

Results are included in the following tables.

Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
University Staff	22	14	NS
Other	22	56	0.001
Correlation = 0.314			
Null hypothesis rejected at 0.001 level			

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
University Staff	7	27	0.001
Other	9	22	0.020
Correlation = -0.098			
No significant Difference			



Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
Producer	16	12	NS
Others	28	58	0.010

Correlation = 0.217

Null hypothesis rejected at 0.050 level

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
Producer	7	21	0.010
Others	9	78	0.001

Correlation = 0.182

No significant Difference

If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
Producer	9	19	NS
Others	13	77	0.001

Correlation = 0.193

Null hypothesis rejected at 0.050 level



If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
University Staff	10	24	0.020
Other	12	72	0.001

Correlation = 0.176

No significant Difference

Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
University Staff	27	8	0.010
Other	38	44	NS

Correlation = 0.284

Null hypothesis rejected at 0.010 level

If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
University Staff	12	22	NS
Other	10	72	0.001

Correlation = 0.268

Null hypothesis rejected at 0.010 level

Those who identified themselves as producers/farmers differed from all respondents only on the issues of which system would be more convenient, and which they would use more frequently. They felt text would be more convenient than the electronic system, but the difference was not statistically significant. Producers were also less convinced that they would use the electronic system more frequently than text.



Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
Producer	15	12	NS
Others	50	40	NS
Correlation = NS			
No significant Difference			

If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
Producer	8	18	0.050
Others	14	76	0.001
Correlation = 0.162			
No significant Difference			

Library staff differed from all other users in being more convinced that the electronic delivery system was more convenient, and in believing that they would prefer to use that system. Results are printed in the following tables.

Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
Library Staff	4	21	0.001
Others	40	49	NS
Correlation = -0.246			
Null hypothesis rejected at 0.010 level			



Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
Library Staff	3	24	0.001
Others	13	75	0.001

Correlation = -0.045

No significant Difference

If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
Library Staff	1	29	0.001
Others	21	67	0.001

Correlation = -0.230

Null hypothesis rejected at 0.020 level

Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
Library Staff	13	16	NS
Others	52	36	NS

Correlation = -0.124

No significant Difference



If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
Library Staff	3	27	0.001
Others	19	67	0.001

Correlation = -0.135

No significant Difference

The same differences were found when library staff was compared with producers. Results are contained in the following tables.

Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
Library Staff	4	21	0.001
Producers	16	12	NS

Correlation = -0.424

Null hypothesis rejected at 0.010 level

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
Library Staff	3	24	0.001
Producers	7	21	0.010

Correlation = -0.180

No significant Difference



If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
Library Staff	1	29	0.001
Producers	9	19	NS

Correlation = -0.381

Null hypothesis rejected at 0.010 level

Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
Library Staff	13	16	NS
Producers	15	12	NS

Correlation = -0.107

No significant Difference

If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
Library Staff	3	27	0.001
Producers	8	18	0.050

Correlation = -0.261

No significant Difference

In order to see if previous experience with a commercial database would affect the results, the responses of individuals who said they had experience with some type of on-line database system was compared with those of individuals who said they had no experience. No significant differences were found. Results are presented in the following tables.



Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
Used Databases	18	38	0.010
No Database Use	11	29	0.010
Correlation = 0.050			
No significant Difference			

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
Used Databases	5	52	0.001
No Database Use	4	38	0.001
Correlation = -0.013			
No significant Difference			

If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
Used Databases	9	49	0.001
No Database Use	4	40	0.001
Correlation = 0.095			
No significant Difference			



Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
Used Databases	32	27	NS
No Database Use	21	20	NS
Correlation = 0.030			
No significant Difference			

If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
Used Databases	9	48	0.001
No Database Use	3	40	0.001
Correlation = 0.134			
No significant Difference			

In order to see if familiarity with the printed version of the Pork Industry handbook would affect response, the significance of this difference was investigated. Users of PIH indicated a preference for the electronic version. No other differences were significant. Results follow:



Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
PIH User	25	52	0.010
Others	19	18	NS

Correlation = -0.182

No significant Difference

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
PIH User	8	71	0.001
Others	8	28	0.001

Correlation = -0.162

No significant Difference

If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
PIH User	9	72	0.001
Others	13	24	NS

Correlation = -0.286

Null hypothesis rejected at 0.010 level



If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
PIH User	48	33	NS
Others	17	19	NS

Correlation = 0.112

No significant Difference

In order to see if computer skill level would affect response answers given by those who rated themselves above average in micro computer skills were compared with those who rated themselves average or below. No significant differences were found. Results follow:

Of these systems of information delivery, which would you say is more convenient to use?

	PIH Text	Electronic	Significance
Skilled	18	20	NS
Average Skill	4	14	0.020

Correlation = 0.240

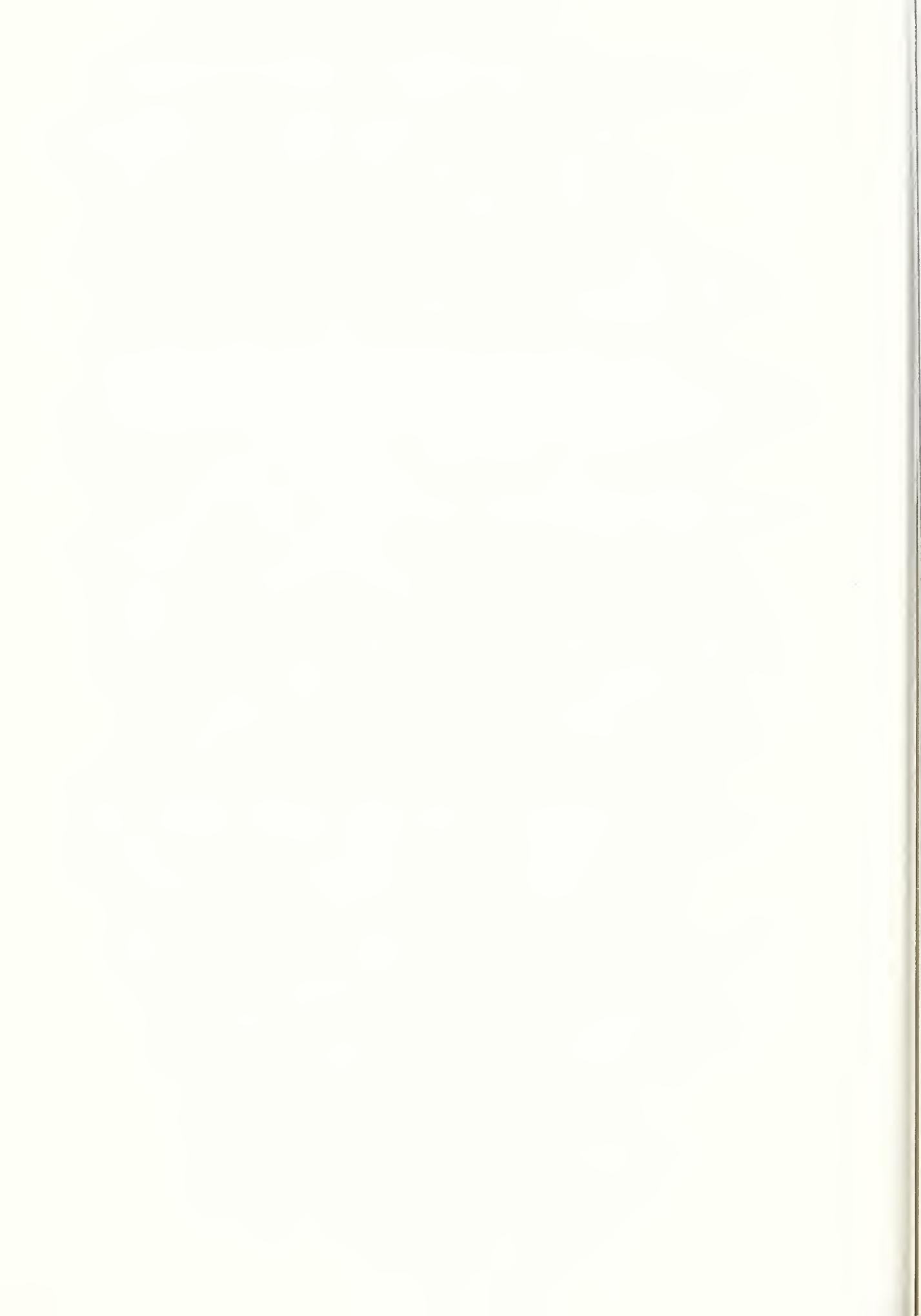
No significant Difference

Which system would you say allows you to find information more rapidly?

	PIH Text	Electronic	Significance
Skilled	8	29	0.001
Average Skill	1	18	0.001

Correlation = 0.211

No significant Difference



If cost were not a factor, which system would you prefer to use?

	PIH Text	Electronic	Significance
Skilled	10	28	0.010
Average Skill	2	17	0.001

Correlation = 0.183

No significant Difference

Which form of information presentation do you find easiest to read?

	PIH Text	Electronic	Significance
Skilled	20	17	NS
Average Skill	11	8	NS

Correlation = -0.037

No significant Difference

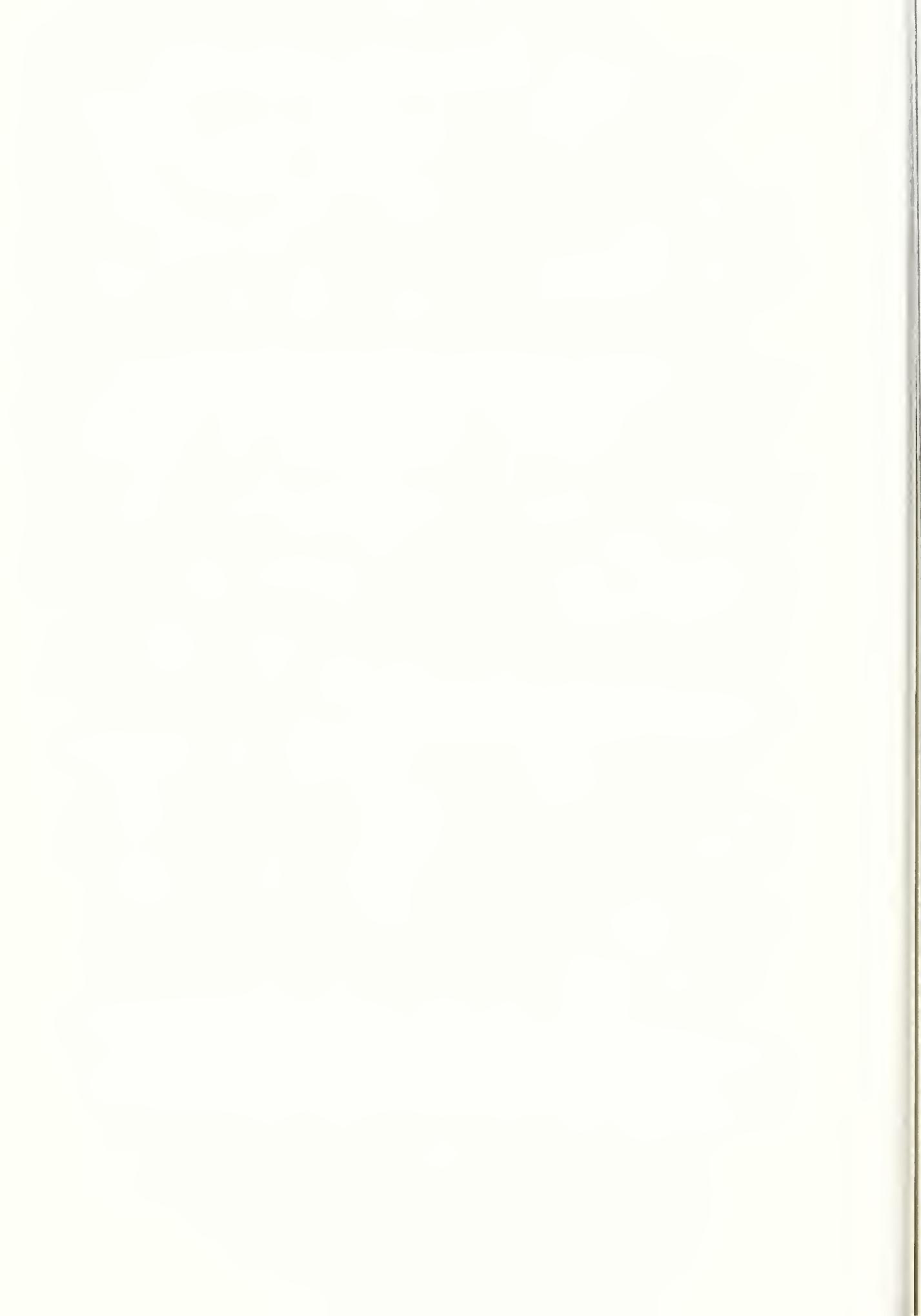
If you had access to both systems, which one do you believe you would use the most?

	PIH Text	Electronic	Significance
Skilled	8	28	0.001
Average Skill	1	18	0.001
Total	9	46	0.050

Correlation = 0.218

No significant Difference

Respondents were asked to estimate how much they would be willing to pay for the electronic service, both as an initial fee and as a yearly maintenance fee. This estimate was to include the information service only, not hardware. Results by the major occupational classifications are presented here.



Classification	Initial	Annual
BRS	37.44	20.28
Laser	44.29	25.25
All	42.89	24.26
University Staff	38.11	17.41
Producers	46.25	24.00
Library	40.78	29.94

7. Discussion and Conclusions

Users of the BRS and laser disc systems generally liked the electronic system, indicating by their answers that they found the electronic system preferable in all cases except ease of reading.

In general, users indicated that they would be willing to pay about \$50 to subscribe to such a service and be willing to pay about \$25 per year for annual updates to the service. This is about double the amount that subscribers pay for the printed version of the Pork Industry Handbook. This level of user support would probably finance the delivery of laser discs to users if the subscription list were large enough (1,500 to 2,000). That level of funding would not sustain regular use on the BRS on-line database. The BRS system, in production, would be more expensive than the laser system. However, it could be expected to be more timely.

It is interesting to note that there were differences between university and library personnel and producers and other users on the issue of convenience. University staff and producers tended to find the printed text more convenient, while library staff favored the electronic system. This could be because producers and university personnel felt the information would be needed in the field and would find carrying the printed version easier than returning to a farm office for use of a microcomputer.

In general, response to the demonstrations indicates that the use of full-text databases has potential. That for many users, the laser system would be preferable, because of cost, and that additional investigation of the potential of this technology could be useful.



Source and Text Files
BRS Tutorial
Appendix A



```
IM AA(177,2)
IM AZ$(2)
LEN 'I',#1,"ANSWERS"
LEN 'I',#2,"$1"
LEN 'I',#3,"T2"
IM AA$(177)
DR QQ=0 TO 176
LINE INPUT #1,WW#
INPUT #2,A1
INPUT #3,A2
AA$(QQ)=WW#
AA(QQ,1)=A1
AA(QQ,2)=A2
NEXT QQ
CLOSE
DIM BUE$(20)
MAX=177
GOTO 500
E$="TERMINAL":GOTO 970
E$="TELENET":GOTO 970
E$="TELENETW":GOTO 970
E$="TYMNET":GOTO 970
E$="UNINET":GOTO 970
E$="DIRDIAL":GOTO 970
E$="ERRORCOR":GOTO 970
E$="DNEWDSCH":GOTO 970
E$="PRINT":GOTO 970
E$="DEZ":GOTO 970
E$="MWDSCHE":GOTO 970
E$="STOPWDS":GOTO 970
E$="LOGOOPS":GOTO 970
E$="TRUNC":GOTO 970
E$="SDI":GOTO 970
E$="ABBREV":GOTO 970
E$="QBROWSE":GOTO 970
E$="CMMDSTK":GOTO 970
E$="LIMIT":GOTO 970
E$="CHANGE":GOTO 970
E$="PRNTOFF":GOTO 970
E$="HITS":GOTO 970
E$="DISPLAY":GOTO 970
E$="SDETAIL":GOTO 970
E$="PURGE":GOTO 970
E$="ACCT":GOTO 970
E$="ROOT":GOTO 970
E$="PARAQUAL":GOTO 970
E$="SAVE":GOTO 970
E$="EXEC":GOTO 970
E$="COSTS":GOTO 970
E$="TIME":GOTO 970
E$="SHIGH":GOTO 970
REM ***** this section begins the program and initializes files *****
KEY OFF
CLS
E$="TITLE":BEEP:GOTO 1940
E$="INTRO":N$="INTRODUCTION":Q1=5
L$="TERMINAL"
J=1
LP=1
R=1
REM
REM ***** this section places menu at bottom and calls first routine *****
REM
REM ***** this section places menu at bottom and calls first routine *****
REM
```



```

DIM AA(177,2)
DIM AZ$(2)
OPEN 'I',#1,'ANSWERS'
OPEN 'I',#2,'S1'
OPEN 'I',#3,'I2'
DIM AA$(177)
FOR QQ=0 TO 176
LINE INPUT #1,WW#
INPUT #2,A1
INPUT #3,A2
AA$(QQ)=WW#
AA(QQ,1)=A1
AA(QQ,2)=A2
NEXT QQ
CLOSE
DIM BUE$(20)
MAX=177
GOTO 500
F$='TERMINAL':GOTO 970
F$='TELENET':GOTO 970
F$='TELENETW':GOTO 970
F$='TYMNET':GOTO 970
F$='UNINET':GOTO 970
F$='DIRDIAL':GOTO 970
F$='ERRORCOR':GOTO 970
F$='ONEWDSCH':GOTO 970
F$='PRINT':GOTO 970
F$='DEE':GOTO 970
F$='MWDSCH':GOTO 970
F$='STOPWDS':GOTO 970
F$='LOGOPS':GOTO 970
F$='TRUNC':GOTO 970
F$='SDI':GOTO 970
F$='ABBREV':GOTO 970
F$='QBROWSE':GOTO 970
F$='CMMDSTK':GOTO 970
F$='LIMIT':GOTO 970
F$='CHANGE':GOTO 970
F$='PRNTOFF':GOTO 970
F$='HITS':GOTO 970
F$='DISPLAY':GOTO 970
F$='SDETAIL':GOTO 970
F$='PURGE':GOTO 970
F$='ACCT':GOTO 970
F$='ROOT':GOTO 970
F$='PARAQUAL':GOTO 970
F$='SAVE':GOTO 970
F$='EXEC':GOTO 970
F$='COSTS':GOTO 970
F$='TIME':GOTO 970
F$='SHIGH':GOTO 970
REM ***** this section begins the program and initializes files *****
KEY OFF
CLS
F$='TITLE':BEEP:GOTO 1940
F$='INTRO':N$='INTRODUCTION':Q1=5
L$='TERMINAL'
J=1
LP=1
R=1
REM
REM ***** this section places menu at bottom and calls first routine *****
REM ***** this section places menu at bottom and calls first routine *****

```


F=1
F J=1 THEN N=1
F R=1 THEN D=1
F R=2 THEN D=D+1
F LP=2 THEN D=D-1
=1
LS
LOCATE 22,1:
RINT "-----"
RINT "PAGE";D;" of ";Q1:LOCATE 23,(80-(LEN(N\$)+7)):PRINT N\$;" LESSON"
RINT "next page....any key" previous page...* options me
LOCATE 1,1
F J=2 THEN X=1
F R=2 THEN 1990 ELSE 1940
EM
EM ***** this section ends the program *****
EM
EM ***** this section starts the next lesson or menu *****
EM
LOSE 1
LS
RINT " YOU HAVE CHOSEN TO END THE PROGRAM"
RINT "
RINT " YOU MAY RESTART IT BY TYPING 'RUN'"
RINT "
RINT " TO GET BACK TO THE OPERATING PART OF YOUR COMPUTER TYPE 'SYSTEM'"
ND
EM
EM ***** this section starts the next lesson or menu *****
EM
=1
=1
\$=L\$
F F\$="INTRO" THEN L\$="TERMID":N\$="INTRODUCTION":Q1=5
F F\$="TYMNET" THEN L\$="UNINET":N\$="TYMNET PUBLIC DIAL SERVICE":Q1=5
F F\$="TELENET" THEN L\$="TELENETW":N\$="TELENET PUBLIC DIAL SERVICE":Q1=6
IF F\$="TELENETW" THEN L\$="TYMNET":N\$="TELENET PUBLIC IN-WATS SERVICE":Q1=6
IF F\$="UNINET" THEN L\$="DIRDIAL":N\$="UNINET PUBLIC DIAL SERVICE":Q1=5
IF F\$="DIRDIAL" THEN L\$="ERRORCOR":N\$="DIRECT DIAL SERVICE":Q1=4
IF F\$="TERMID" THEN L\$="TELENET":N\$="TERMINAL IDENTIFIERS":Q1=6
IF F\$="ERRORCOR" THEN L\$="ONEWDSCH":N\$="ERROR CORRECTION":Q1=2
IF F\$="ONEWDSCH" THEN L\$="PRINT":N\$="ONE WORD SEARCH":Q1=3
IF F\$="PRINT" THEN L\$="OFF":N\$="PRINT":Q1=9
IF F\$="OFF" THEN L\$="MWDSCH":N\$="OFF":Q1=3
IF F\$="QBROWSE" THEN L\$="CMMDSIK":N\$="QUICK BROWSE":Q1=1
IF F\$="MWDSCH" THEN L\$="STOPWDS":N\$="MULTIPLE WORD SEARCH":Q1=7
IF F\$="STOPWDS" THEN L\$="LOGOPS":N\$="STOPWORDS":Q1=3
IF F\$="LOGOPS" THEN L\$="TRUNC":N\$="LOGICAL OPERATORS":Q1=4
IF F\$="TRUNC" THEN L\$="SDI":N\$="TRUNCATION":Q1=3
IF F\$="ABBREV" THEN L\$="QBROWSE":N\$="ABBREVIATIONS":Q1=2
IF F\$="CMMDSIK" THEN L\$="LIMIT":N\$="COMMAND STACKING":Q1=4
IF F\$="LIMIT" THEN L\$="CHANGE":N\$=F\$":Q1=6
IF F\$="CHANGE" THEN L\$="PRNTOFF":N\$=F\$":Q1=3
IF F\$="PRNTOFF" THEN L\$="HITS":N\$="PRINTOFF":Q1=6
IF F\$="HITS" THEN L\$="DISPLAY":N\$=F\$":Q1=5
IF F\$="PARAQUAL" THEN L\$="SAVE":N\$="PARAGRAPH QUALIFIERS":Q1=6
IF F\$="EXEC" THEN L\$="COSTS":N\$=F\$":Q1=2
IF F\$="DISPLAY" THEN L\$="SDETAIL":N\$=F\$":Q1=4
IF F\$="SDETAIL" THEN L\$="PURGE":N\$="SET DETAIL":Q1=3
IF F\$="PURGE" THEN L\$="ACCT":N\$=F\$":Q1=3
IF F\$="ACCT" THEN L\$="ROOT":N\$=F\$":Q1=7
IF F\$="ROOT" THEN L\$="PARAQUAL":N\$=F\$":Q1=6
IF F\$="SDI" THEN L\$="ABBREV":N\$=F\$":Q1=16



```

E E$="TIME" THEN L$="SHIGH":N$=E$:Q1=1
E E$="SHIGH" THEN L$="INTRO":N$="SET HIGHLIGHT":Q1=1
E E$="SAVE" THEN L$="EXEC":N$=E$:Q1=2
=1
OTO 610
EM
EM ***** this section restarts the last lesson *****
EM
LOSE 1
=1
=1
OTO 610
EM
EM ***** this section starts the last page *****
EM
P=2
S=PS-2
LOSE:OPEN "I",#1,E$
OR AZ=1 TO (20 * PS)
INE INPUT #1,K$
EXT AZ
=2
=1:GOTO 680
EM *****
EM ***** this section starts the next page *****
EM
=2
E ASC(A$)=42 AND D=1 THEN R=1:CLOSE
=2
P=1
OTO 650
EM
EM ***** this section begins options menu:*****
LS
LOSE 1
RINT*                               OPTIONS MENU*
RINT*
RINT*
RINT*
RINT*      END PROGRAM.....1      ABBREVIATIONS.....19"
RINT*      NEXT LESSON.....2      QUICK-BROWSE.....20"
RINT*      SAME LESSON.....3      COMMAND STACKING.....21"
RINT*      TERMINAL IDENTIFIERS..4      LIMIT.....22"
RINT*      TELENET.....5      CHANGE.....23"
RINT*      TELENET-IN-WATS..6      PRINTOEE.....24"
RINT*      TYMNET.....7      HITS.....25"
RINT*      UNINET.....8      DISPLAY.....26"
RINT*      DIRECT DIAL.....9      SET DETAIL.....27"
RINT*      ERROR CORRECTION....10      PURGE.....28"
RINT*      ONE WORD SEARCHING...11      ACCT.....29"
RINT*      PRINT.....12      ROOT.....30"
RINT*      OFF.....13      PARAGRAPH QUALIFIERS...31"
RINT*      MULTIPLE WORD SEARCH..14      SAVE.....32"
RINT*      STOPWORDS.....15      EXEC.....33"
RINT*      LOGICAL OPERATORS....16      COSTS.....34"
RINT*      TRUNCATION.....17      TIME.....35"
RINT*      SDI.....18      SET HIGHLIGHT.....36"
RINT*
RINT*
INPUT;"ENTER SELECTION NUMBER AND HIT CARRIAGE RETURN - ",C$
3: VAL(C$)

```



10,460,470,480,490,495
IF B<1 OR B>36 THEN 1620
REM
REM ***** this section prints one lesson page on the screen *****
REM
X=1
PS=0
OPEN "I",#1,F\$
IF EOF(1) THEN 2080
LINE INPUT #1,K\$
PRINT K\$
X=X+1
IF X=21 THEN PG=PS+1
IF X=21 THEN 2190 ELSE 1990
REM
REM ***** this section controls the end of a file *****
REM
CLOSE 1
Q=2
PS=PS+1
R=1
IF F\$="INTRO" THEN 2141 ELSE 2150
LOCATE 23,1
PRINT"options menu....any key" previous page....* options .
FOR E=1 TO 6
LOCATE 24,1
PRINT"
LOCATE 24,1
PRINT" ---> note that the above menu has changed <---";
NEXT E
GOTO 2190
IF F\$="TELENETW" THEN LOCATE 19,((30-LEN(N\$))/2):GOTO 2152
LOCATE 20,((30-LEN(N\$))/2)
PRINT"*** THIS IS THE LAST PAGE OF INSTRUCTIONS FOR ";N\$;" ***"
LOCATE 23,1
PRINT"execution section....any key" previous page....* options .
GOTO 2143
REM
REM ***** this section handles input during a lesson page *****
REM
A\$=INKEY\$:IF A\$="" THEN 2210 ELSE 2250
REM
REM THE % MEANS THE VIEWER WANTS THE OPTIONS MENU
REM
IF A\$="% THEN 1610 ELSE 2290
REM
REM THE * MEANS THE USER WANTS THE LAST PAGE
REM
IF A\$="*" AND D>1 THEN 1410 ELSE 2330
REM
REM ANY KEY MEANS THE USER WANTS TO SEE THE NEXT PAGE
REM
IF ASC(A\$)<>37 AND Q=1 THEN 1520 ELSE 2340
CLOSE:IF F\$="TITLE" THEN 540
IF F\$="INTRO" THEN 1610
IF Q=2 THEN 2390
A\$=""
GOTO 2210
REM
REM *****



EM ***** this section appears at the end of an instructional lesson *****
EM ***** it talks about what the next section (EXECUTION) will do *****
EM
BY OFF
LS
RINT*****
LOCATE 2,1:PRINT "*"
LOCATE 2,15
RINT "*" You have completed the INSTRUCTION part of the A"
LOCATE 2,80:PRINT "*"
LOCATE 3,1:PRINT "*"
LOCATE 3,((46-LEN(N\$)-7)/2)+16)
RINT N\$;" LESSON"
LOCATE 3,80:PRINT "*"
RINT "*"
RINT "*" This begins the EXECUTION SECTION for this lesson. You will be able
RINT "*" to perform various tasks which are associated with the current
RINT "*"
RINT "*" This section of the lesson will attempt to duplicate the actual BRS
RINT "*" computer with its prompts and messages, and you will be expected
RINT "*" to interact with it by responding to the instructions which are listed
RINT "*" at the bottom of the page along with a CONTROL menu.
RINT "*"
RINT "*" However, you should understand that this tutorial MAY NOT act exactly
RINT "*" as the BRS computer would. For example, you may respond with a
RINT "*" perfectly appropriate command for the BRS system which MAY NOT
RINT "*" APPROPRIATE to the test conditions for this tutorial. THIS PROGRAM
RINT "*" WILL ONLY REACT TO A CORRECT INPUT FOR THE DIRECTIONS.
RINT "*"
RINT "*" You can halt long print executions by using CONTROL-b (^b) which
RINT "*" stops printing until a return key is hit. (BRS requires other keys
RINT "*"
RINT "*" ***** HIT ANY KEY TO BEGIN EXECUTION *****
RINT*****
A\$=INKEY\$:IF ZA\$=" " THEN 2760 ELSE 2770
F VAL(ZA\$)=32 THEN 2830 ELSE 2830
EM
EM ***** this section is the controller for the EXECUTION segment *****
EM
LS:LOCATE 20,1
RINT-----
RINT" options menu..%" return to lesson..@ next question..& try
EM ***** this section goes to find out the parameters of line numbers *****
EM ***** for each lesson, then opens the files and prints out questions *****
EM ***** and BRS system simulations before the answer is input *****
=1
AD=1
OTO 3960
OTO 3080
F P=PE THEN 2941 ELSE 2947
OR E=1 TO 4
LOCATE 22,1
RINT
LOCATE 22,((34-LEN(N\$))/2)
RINT"-->* This is the last task for the ";N\$;" lesson *--"
EXT E
LOCATE 21,1
RINT" options menu..%" return to lesson..@ next question..& try
AD=1
LOCATE 23,1
OPEN "R",#1,"RQUEST",80
FIELD #1,80 AS F1\$



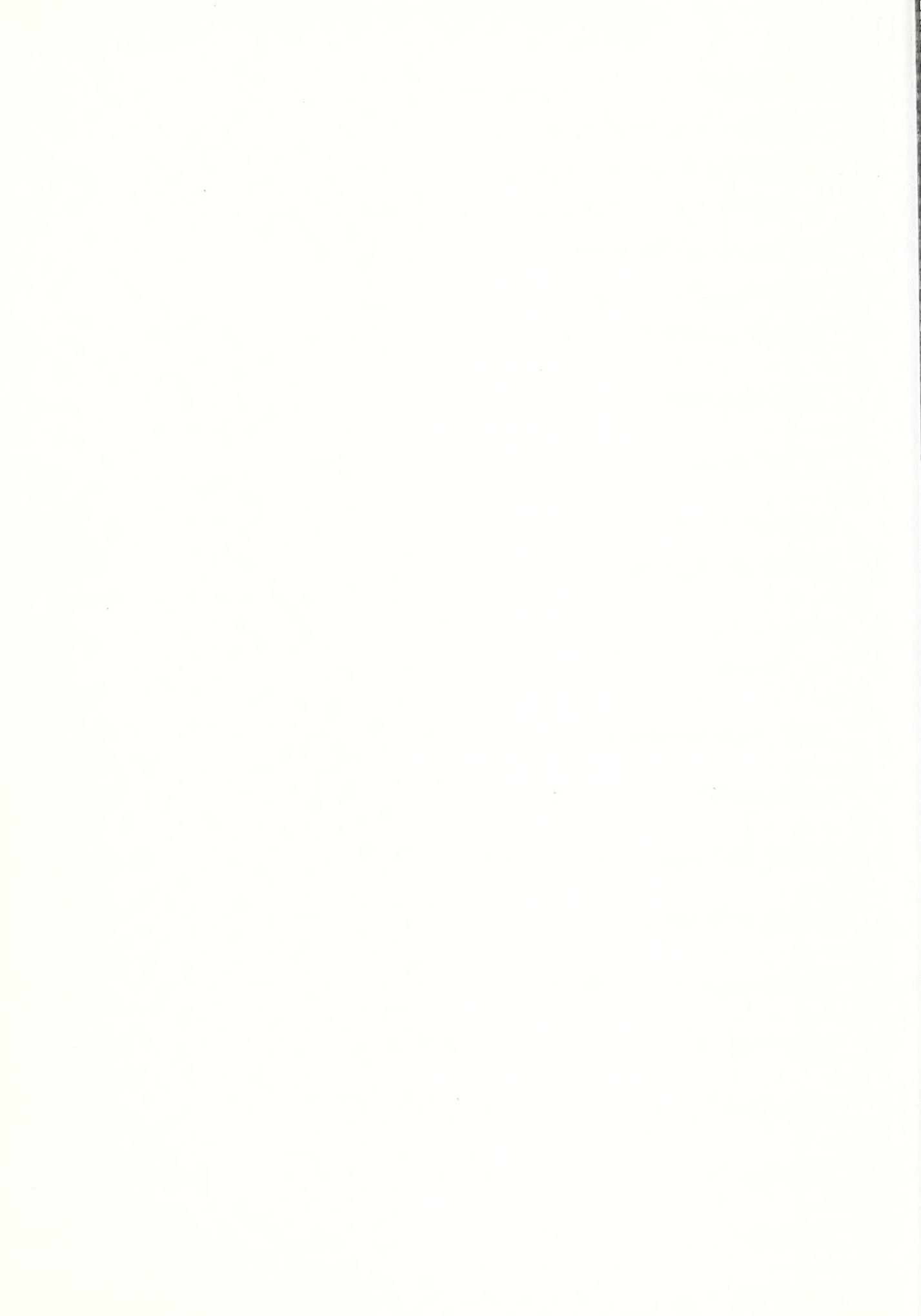
ET \$1,(V+E)
Z\$(E)=F1\$
RINT F1\$;
EXT E
LOSE 1
OTO 3290
LAG1=1
OTO 5210
PEN "R",#1,"MBA",80
IELD #1,80 AS F1\$
OR E= 1 TO Z
ET #1,(Y+E)
\$=F1\$
R#=Z\$
LAG2=1
OTO 5430
EXT E
LOSE 1
9=CSRLIN
OTO 2940
EM
EM ***** this section takes user input and checks to see if it's an *****
EM ***** escape character; if not, then it accepts the full input *****
EM ***** and changes it to all caps to be tested against the array *****
EM ***** answers, if no hit then it returns to remove the spaces *****
EM ***** following a / and runs through the array again *****
EM
LAG2=2
\$=" "
IF ASC(RIGHT\$(GR\$,1))=32 THEN 3320 ELSE 3330
R\$=LEFT\$(GR\$, (LEN(GR\$)-1)):GOTO 3310
\$=GR\$
LOCATE (X9-1),(LEN(Z\$)+2)
B\$=INKEY\$:IF AB\$="" THEN 3350 ELSE 3360
RINT AB\$;
IF AB\$="%" THEN 1620
IF AB\$="@" THEN 610
IF AB\$="#" THEN P=P+1:GOTO 3960
IF AB\$="!" THEN 2930
IF BAD=2 THEN 5900
IF BAD=3 THEN 1620
LINE INPUT D\$
I\$=AB\$+D\$
Z\$=Z\$+G\$
FLAG=1
OTO 5430
CC=1:GOTO 3770
K=0
IF B\$=AA\$(K) THEN 3630
IF K<MAX THEN K=K+1 ELSE 3520
GOTO 3490
IF K=MAX AND CC=1 THEN 3870
IF K=MAX AND CC=2 THEN LOCATE 22,1
BEEP
FOR EE=1 TO 6
LOCATE 22,1
PRINT
LOCATE 22,1
PRINT "-->*** SORRY, BUT THE RESPONSE DOES NOT SATISFY THE EXECUTION PARAMETER
NEXT EE
PRINT
PRINT " USE THE ABOVE MENU TO CONTINUE, OR ANY KEY FOR A LISTING OF CORRECT R
BAD=2
GOTO 3290
B=AA(K,1)

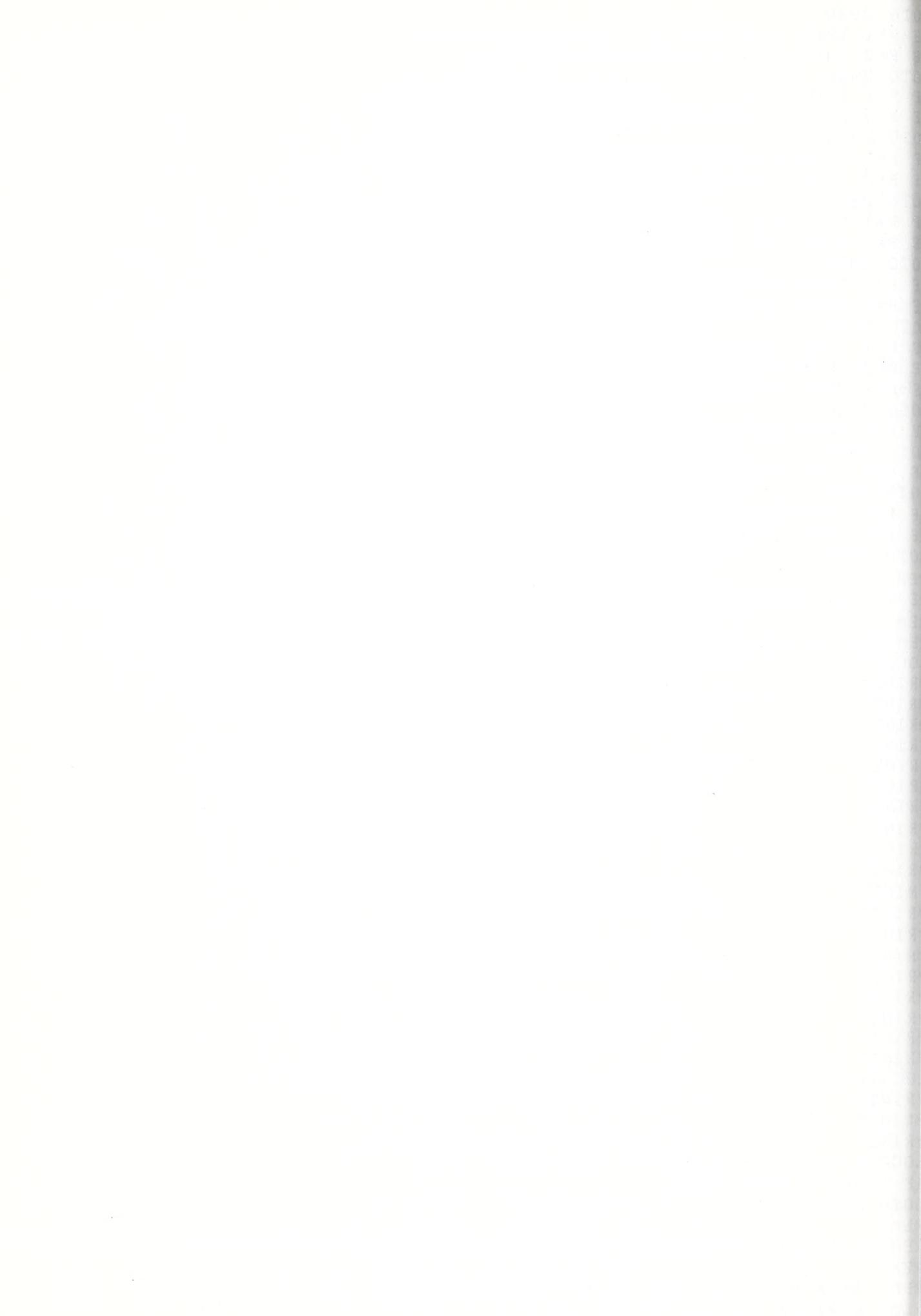


PEN "R",#1,"!MAA",80
IELD #1,80 AS F1#
OR E= 1 TO T
ET #1,(S+E)
#=F1#
R#=Z#
LAG2=3
OTO 5430
EXT E
LOSE 1
9=CSRLIN
OR E=1 TO 6
OCATE 22,1
RINT
OCATE 22,1
RINT--** GOOD JOB, THE INPUT IS CORRECT; USE THE ABOVE MENU TO CONTINUE **
EXT E
OTO 3290
EM
EM ** this section makes the string all caps without removing spaces **
EM
:#= " "
IF ASC(LEFT\$(G\$,1))>=97 AND ASC(LEFT\$(G\$,1))<=122 THEN 3820 ELSE GOTO 3830
G\$=CHR\$(ASC(LEFT\$(G\$,1))-32)+RIGHT\$(G\$,LEN(G\$)-1)
G\$=B\$+LEFT\$(G\$,1)
G\$=RIGHT\$(G\$,LEN(G\$)-1)
IF LEN(G\$)=0 THEN 3860 ELSE GOTO 3810
OTO 3480
AAA\$=B\$
B\$=" "
IU=1
IF ASC(LEFT\$(AAA\$,1))=47 THEN UU=2
IF UU=2 AND ASC(LEFT\$(AAA\$,1))=32 THEN 3930
G\$=B\$+LEFT\$(AAA\$,1)
AAA\$=RIGHT\$(AAA\$,LEN(AAA\$)-1)
IF LEN(AAA\$)=0 THEN 3950 ELSE GOTO 3900
C=2:GOTO 3480
IF F\$="TYMNET" THEN 4290
IF F\$="TELENET" THEN 4310
IF F\$="TELENETW" THEN 4330
IF F\$="UNINET" THEN 4350
IF F\$="DIRDIAL" THEN 4370
IF F\$="TERMIN" THEN 4390
IF F\$="ERRORCOR" THEN 4410
IF F\$="ONEWDSCH" THEN 4430
IF F\$="PRINT" THEN 4460
IF F\$="OEE" THEN 4490
IF F\$="QBROWSE" THEN 4520
IF F\$="MWDSCH" THEN 4540
IF F\$="STOPWDS" THEN 4570
IF F\$="LOGOPS" THEN 4590
IF F\$="TRUNC" THEN 4620
IF F\$="ABBREV" THEN 4650
IF F\$="CMMDSTK" THEN 4680
IF F\$="LIMIT" THEN 4710
IF F\$="CHANGE" THEN 4740
IF F\$="PRNTOFF" THEN 4770
IF F\$="HITS" THEN 4800
IF F\$="PARAQUAL" THEN 4830
IF F\$="SHIGH" THEN 4860
IF F\$="EXEC" THEN 4880
IF F\$="DISPLAY" THEN 4910
IF F\$="SDETAIL" THEN 4940
IF F\$="PURGE" THEN 4970
IF F\$="ACCT" THEN 5000



F\$="SDI" THEN 5060
F\$="COSTS" THEN 5100
F\$="TIME" THEN 5120
F\$="SAVE" THEN 5140
P=1 THEN V=94:Y=96:Z=2:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=82:Y=87:Z=2:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=84:Y=89:Z=2:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=96:Y=98:Z=2:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=18:Y=19:Z=3:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=86:Y=91:Z=5:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=24:Y=24:Z=10:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=50:Y=4:Z=2:QY=76:QZ=76:PE=2
P=2 THEN V=52:Y=62:Z=1:QY=168:QZ=168
OTO 2930
P=1 THEN V=54:Y=65:Z=5:QY=77:QZ=100:PE=2
P=2 THEN V=56:Y=65:Z=5:QY=101:QZ=104
OTO 2930
P=1 THEN V=46:Y=63:Z=1:QY=72:QZ=73:PE=2
P=2 THEN V=48:Y=64:Z=1:QY=74:QZ=75
OTO 2930
P=1 THEN V=110:Y=104:Z=2:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=42:Y=61:Z=1:QY=58:QZ=69:PE=2
P=2 THEN V=44:Y=62:Z=1:QY=70:QZ=71
OTO 2930
P=1 THEN V=80:Y=82:Z=5:QY=0:QZ=0:PE=1
OTO 2930
P=1 THEN V=38:Y=2:Z=2:QY=54:QZ=55:PE=2
P=2 THEN V=40:Y=60:Z=1:QY=56:QZ=57
OTO 2930
P=1 THEN V=90:Y=59:Z=1:QY=137:QZ=137:PE=2
P=2 THEN V=92:Y=61:Z=1:QY=138:QZ=138
OTO 2930
P=1 THEN V=0:Y=0:Z=2:QY=1:QZ=1:PE=2
P=2 THEN V=2:Y=2:Z=2:QZ=2:QZ=2
OTO 2930
P=1 THEN V=12:Y=2:Z=2:QY=15:QZ=18:PE=2
P=2 THEN V=14:Y=17:Z=2:QY=19:QZ=20
OTO 2930
P=1 THEN V=34:Y=55:Z=4:QY=46:QZ=49:PE=2
P=2 THEN V=36:Y=59:Z=1:QY=50:QZ=53
OTO 2930
P=1 THEN V=8:Y=4:Z=2:QY=5:QZ=6:PE=2
P=2 THEN V=10:Y=4:Z=2:QY=9:QZ=10
OTO 2930
P=1 THEN V=58:Y=70:Z=4:QY=105:QZ=110:PE=2
P=2 THEN V=60:Y=74:Z=4:QY=169:QZ=172
OTO 2930
P=1 THEN V=30:Y=34:Z=20:QY=35:QZ=35:PE=2
P=2 THEN V=32:Y=54:Z=1:QY=36:QZ=45
OTO 2930
P=1 THEN V=106:Y=62:Z=1:QY=143:QZ=143:PE=2
P=2 THEN V=108:Y=100:Z=4:QY=144:QZ=167
OTO 2930
P=1 THEN V=98:Y=4:Z=2:QY=173:QZ=174:PE=2
P=2 THEN V=100:Y=61:Z=1:QY=175:QZ=176
OTO 2930
P=1 THEN V=26:Y=4:Z=2:QY=31:QZ=32:PE=2





```
FLAG1=1 THEN NN=0 ELSE NN=NN+1
:CSRLIN+1
:INKEY$:IF V$="" THEN 5540 ELSE 5530
ASC(V$)=2 THEN 5800
: " :IF FLAG2=2 THEN 5550 ELSE 5580
( G1=1 TO (79-(LEN(Z$)))
:Z$+Q$
XT G1
NN <= 18 THEN 5730 ELSE 5620
1
1 ****this section does the scrolling when the lines are > 17 ****
1
DATE 1,1
FLAG2=2 THEN BUE$(18)=Z$:GOTO 5690
E$(19)=Z$
1 YY= 0 TO 18
E$(YY)=BUE$(YY+1)
INT BUE$(YY)
XT YY
TO 5770
M
M **** this section prints a line, skipping over user input ****
M
FLAG2=2 THEN NN=NN-1:BUE$(NN)=Z$:GOTO 5760
E$(NN)=Z$
INT BUE$(NN)
AG1=2
1 FLAG2=1 THEN 3180
1 FLAG2=2 THEN 3470
1 FLAG2=3 THEN 3730
1 FLAG2=4 THEN 5980
EP
R AQ=1 TO 3
DATE 22,1
INT'
DATE 22,1
INT' *** PRINT HAS BEEN TEMPORARILY HALTED, HIT RETURN KEY TO RESUME PRIN
XT AQ
=INKEY$:IF V$="" THEN 5820 ELSE 5830
ASC(V$)<>13 THEN 5820 ELSE 5840
DATE 22,1
INT'
DATE AG,1
TO 5540
DATE 22,1
INT' ABOVE ARE PRINTED POSSIBLE INPUTS; CONTROL-B HALTS PRINTING; RETURN !
INT AZ$(1);
INT AZ$(2);
AG1=1
AG2=4
OTO 5210
OR AX=QY TO QZ
=AA$(AX)
OTO 5510.
EXT AX
OCATE 21,1
PRINT' options menu..% (or any key) return to lesson..@ next question..& (
PRINT' ABOVE ARE PRINTED POSSIBLE CORRECT INPUTS; NOTE CHANGES IN THE ME
PRINT AZ$(1);
PRINT AZ$(2);
AD=3
OTO 3290
```


An auto-tutorial for using a full text database of the

"Port Industry Handbook"

available on the BRS system

Sponsored by the USDA National Agricultural Library

Prepared by: Purdue University
Agricultural Communication Service

Eldon Fredericks, department head

James Morrison, principal investigator

Alan Warble, program designer

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Any key to go on >



ITION!

rk Industry Handbook" (PIH) is now accessible via a computer and the phone lines by accessing BRS. BRS is a computer system where users access the database through their computer and modem. They can search for any information and it returned either directly to their terminals (and screens) or indirectly via an offline search with the information sent to their address by mail.

Program is a tutorial which guides the user through a series of lessons. It is designed to allow for actual access to the system after only five lessons, but it also allows the user to learn more about the system's capabilities by following more than 30 menu driven lessons. Each lesson is self-explanatory and can be skipped, repeated or ended by issuing commands found at the bottom of each screen. The 'Options Menu' and the 'Execution' menu both require hitting 'carriage return' <cr> after the input, while the bottom page menus only require the character itself to be typed.

Below are the minimum needed to access and use the BRS system database.

To access BRS, the user should first log-on by using ONE of the systems discussed in the following lessons.

ENET (lesson #5), TELENET IN-WATS (#6), TYNNET (#7), UNINET (#8) or DIRECT DIAL (#9)

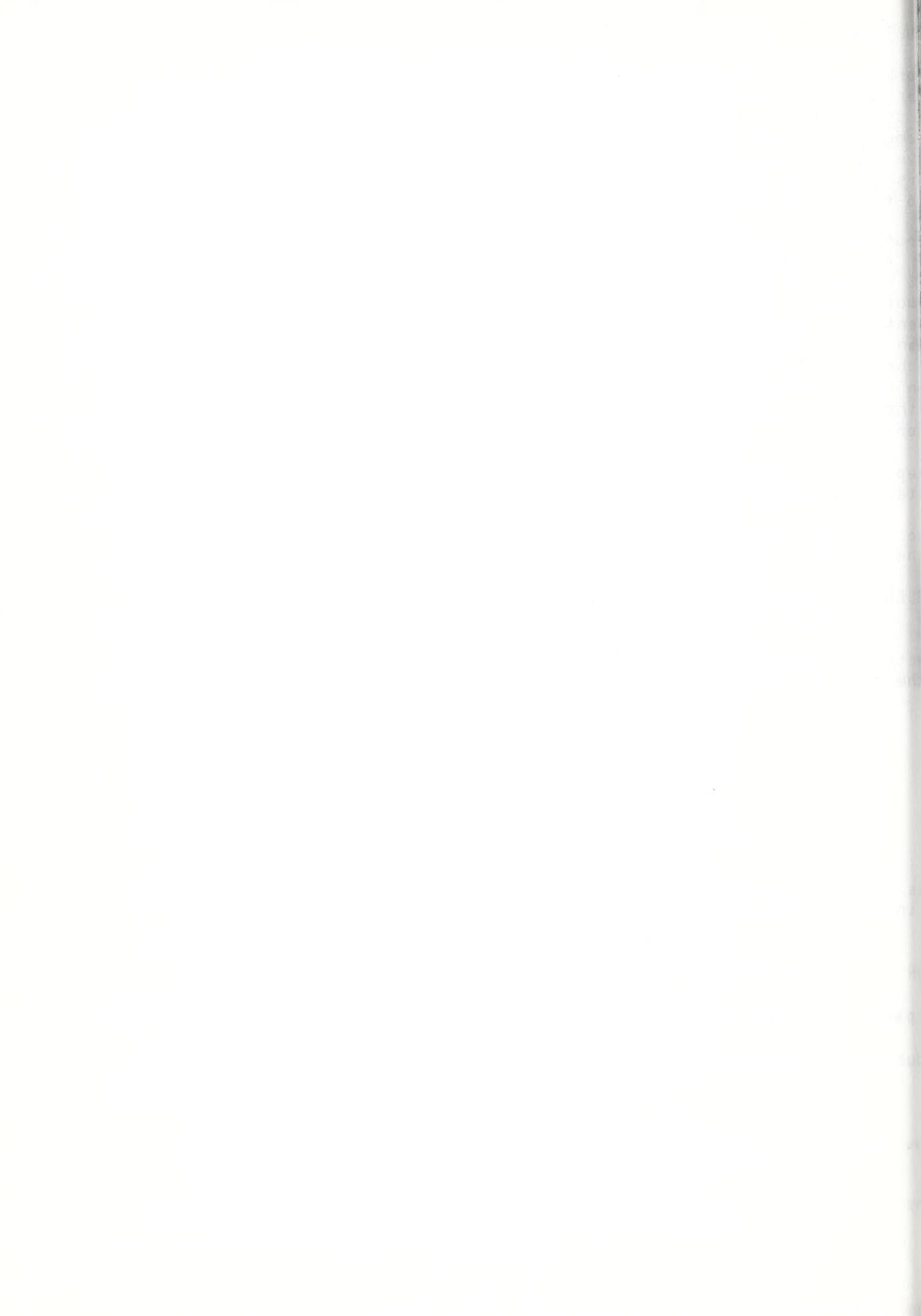
To actually use BRS, the user should become familiar with ALL of the following lessons.

ERROR CORRECTION	(#10)
ONE WORD SEARCHING	(#11)
PRINT	(#12)
OFF	(#13)

For an explanation of the flow of this tutorial. The last page of the introduction also shows the tutorial flow graphically.

	FUNCTION	CONTROL POSSIBILITIES
Page	Begin tutorial	any key.....introduction
Action	Explain tutorial	any key.....next page any key on last page...options menu X key.....options menu
Menu	Allow the user to choose lessons	number and carriage return <cr>...lesson
Action	Instruct the user on a BRS feature	any key.....next page any key on last page...execution explanation X key.....options menu

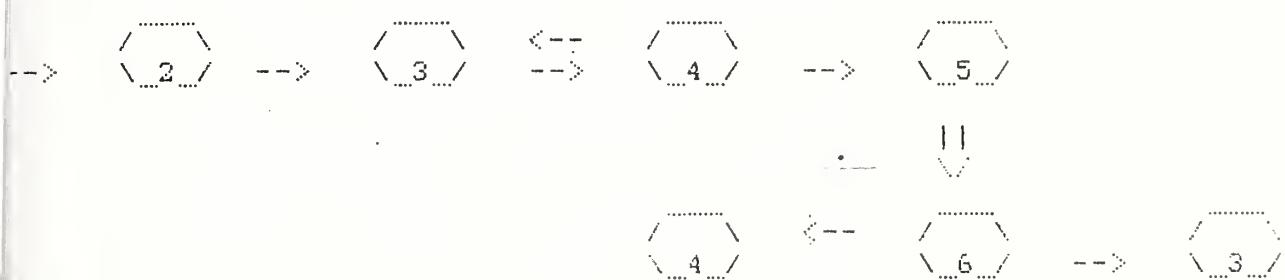
This is a continuation of the previous page explaining tutorial flow.



in tion	Explanation of execution section	any key.....execution section
in	Requires the user to perform a task learned in the previous lesson	% key.....options menu @ key.....return to lesson & key.....next question ! key.....try question again user input and <cr>.....interact with program

Execution section will only respond to the control keys when they are first key entered after a program response. If the user's response is correct, the program will signal at the bottom. The user may then use the control keys; any other key will print out the correct inputs. Lower case inputs are both acceptable for input.

the CONTROL FLOW graphically illustrating the possible paths in this tutorial.



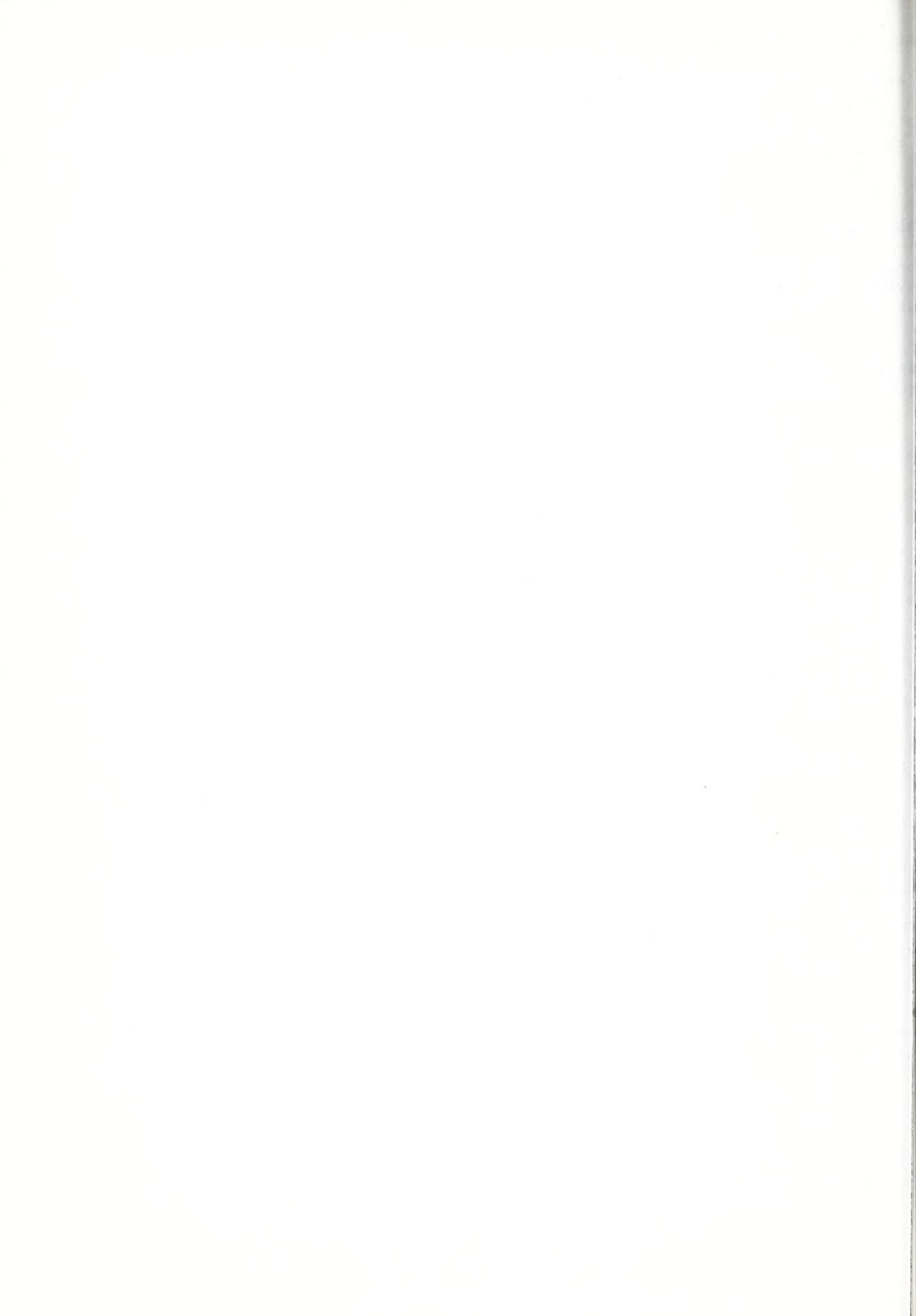
file page
roduction
ions menu (36 choices)
ividual lessons
cution explanation page
cution page (interactive section)



IDENTIFIERS

net and Telenet-in-wats systems as well as the "profile" of 'acct' (see the ACCF lesson) all require a two letter ID for the type of terminal the searcher is using. Following is a list of many of the terminal types and their descriptions.

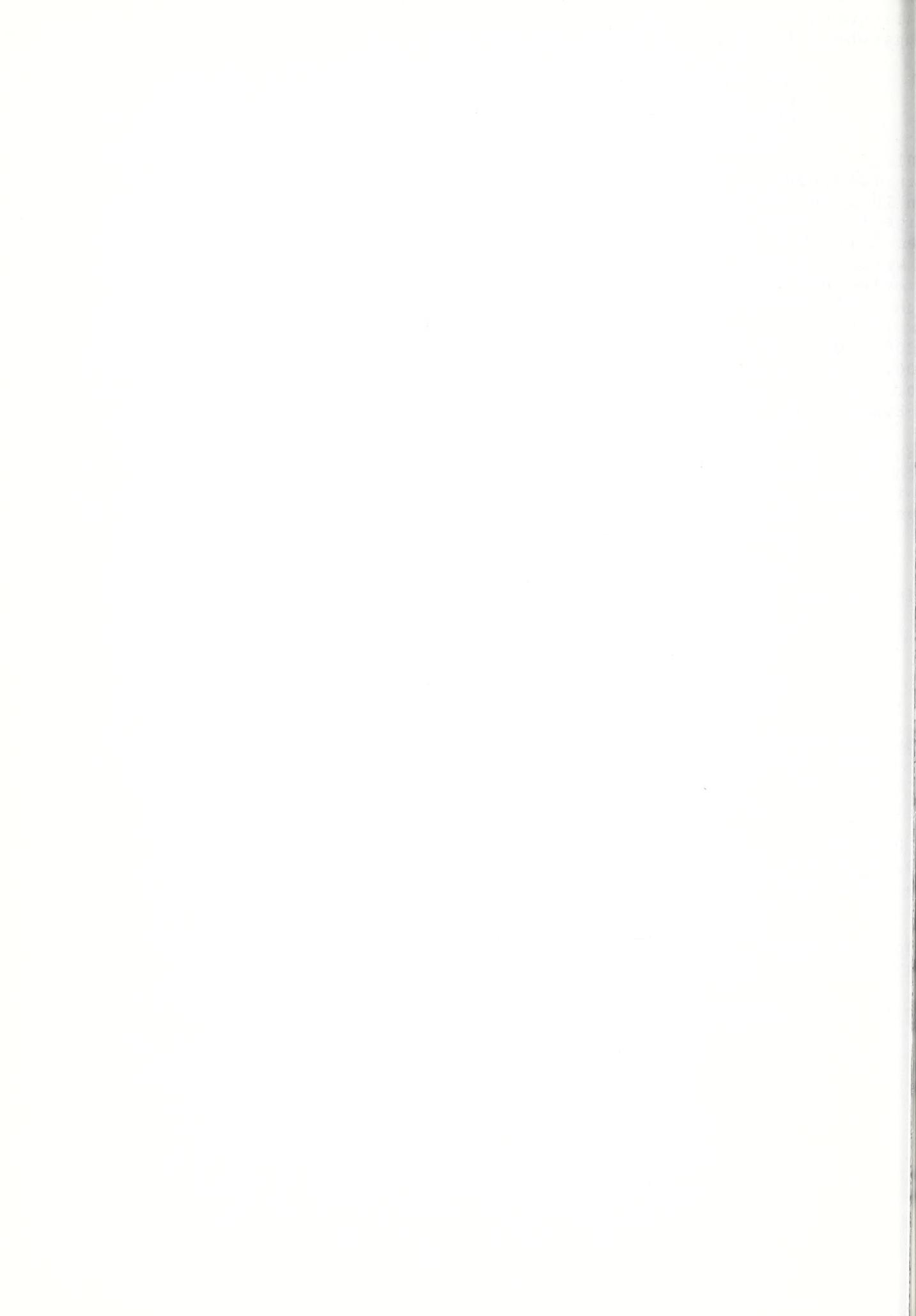
MODEL	ID
nsul 520,580,980.....	dl
oy 620, Regent.....	dl
s Data Terminal T-133.....	al
T-300.....	a8
T-1200.....	a3
s Miniterm.....	a2
uard Amtex 425.....	dl
Jacobson 510.....	dl
630.....	bl
830,832.....	b3
841.....	‡
860.....	b5
I.....	dl
00,800.....	dl
taspeed 40/1,40/2,40/3.....	dl
Minibee, Microbee.....	dl
ix 761.....	a8
re Pet.....	dl
color II.....	dl
r Devices CDI 1030.....	a2
Teleterm 1132.....	a8
Miniterm 1200 series.....	a2
r Transceiver Execuport 300.....	a2
1200.....	a9
4000.....	a8
0,8000.....	dl
ia Elite.....	dl
nt 1500,1800,2200,3000,3300,3600,3800.....	dl
oducts Portaterm.....	al
rminal & Communications DTC 300,302.....	b3
Hyterm.....	b3
g 33 & Telecomputer II.....	dl
Equipment (LA 35-36) Decwriter II.....	a8
(LA 120) Decwriter III.....	a8
VT50,VT52,VT100,WS78,WS200.....	dl
am Systems 300.....	b3
abinet 30.....	a5
300.....	a4
120,1200.....	a3
l Terminal GT-100A,GT-101,GT-110.....	dl
GT-400,GT400B.....	dl
ine 1500,1400,2000.....	dl
t Packard 2621.....	d3
2640 Series.....	dl



1 (Correspondence Code)

phere Element Code: 4001,005,007,008...cl
022,030,050,053,067,070,085.....cl
006,010,015,019,059,090.....c2
021,025-029,031-039,060,068.....c3
086,123;129-145,156,161.....c3
043,054.....c4
l.....dl
r 1304,B304.....dl
100,200,400,Vistar.....dl
gent Systems Intecolor.....dl
c Intertube II.....dl
Word Processor.....dl
egler ADM Series.....dl
n 1202,1303.....dl
1240.....a2
000,2001.....dl
0.....dl
.....a2
Elmer Model 1100,Owl,Bantam.....dl
Carousel 300 Series.....a8
hack TRS 80.....dl
h Inc. Teleray.....dl
ix 40002-4024.....dl
e Model 33,35.....a1
40.....dl
43.....b3
40/1,40/2,40/3.....dl
nstrument 725.....a7
733.....a2
735.....a6
743,745,763,765.....dl
820.....b3
99/4.....dl
a 1000,1500,2000.....a
4000 (ASCII).....a1
e 110,212.....a2
315.....a3
325.....b3
DCT 500.....b4
0,25,30,015,130,145.....dl
n Union EDT 33,35.....a1
300.....a3
1200.....a4
300,850,860.....dl
1700.....b3

IBM 2741 codes)



INET PUBLIC DIAL SERVICE

TERMINAL INSTRUCTIONS:

User may set the terminal at either HALF or FULL duplex. The session below is for access using HALF duplex, with notes on FULL duplex.

User should dial the number for the Telenet node for the area.

At high-pitched tone, the user should place the receiver in the for the terminal.

Note that if a busy signal occurs or there is no answer upon dialing the number, the user should call the TELENET Customer Service number to report the problem:

800-336-0437

When the number has been successfully reached, the user should hit carriage return key twice to bring up Telenet on the computer.

User should then follow the procedure indicated in the sample below.

TELENET SESSION

Input is in lower case, and system response is in upper

(cr) (cr)

L=ti33 (get this identifier for most terminal types from the TERMINAL IDENTIFIERS lesson)

ff (enter the word "half"--each letter is printed twice; eliminate this step for full duplex)

20br (enter the BRS computer address spaced as shown)

CONNECTED

BRS PASSWORD

XXXXX

(enter the 6-character password assigned at the time of membership)

SECURITY PASSWORD

XXXX

(enter the security password assigned at the time of membership)

Times at sign on time are indicated by one of the following

etc.

message returns if an unauthorized password is used or the authorized password is entered incorrectly. Sign off is immediate this message, and the user is automatically disconnected from the system.

E0702 BRS UNAVAILABLE FOR SIGN ON

message indicates that the system is operational but that a master-terminal transaction is in process. The user should hang up and wait 10 minutes to repeat the sign on procedure.

If there are no errors, the next system response may be:

XX MESSAGES PENDING IN MSGS

message refers to a message system available through BRS. The 'XX' is the number of messages pending. A complete description of this function and how to use it will be obtained from BRS at time of membership.

BROADCAST MESSAGE CHANGED XX/XX/85 AT XX:XX:XX.
ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE.

message always appears during sign on and allows the user to read any important database or system messages by typing 'y'. To skip these messages, the user types 'n'.

At the system broadcast messages prompt, the next BRS output should be:

ENTER DATA BASE NAME:

ENTER DATABASE PASSWORD

XXXXXXXXXXXXXXXX

Allows the user to access a large variety of databases available through BRS. These databases vary in search costs and the information on them will be received at the time of membership to BRS.

In this specific case, the 'Pork Industry Handbook' is accessed by typing 'half' in response to the 'DATA BASE' prompt. The security word is entered after the 'DATABASE NAME' and it too is assigned to the user by BRS.



IN-WATS

at Customer Service: 800-336-0437)

User should set the terminal for either FULL or HALF duplex. A sample session is for access in HALF duplex.

User should dial the Telenet In-Wats number (800-424-9494). Insert phone in the coupler to the terminal upon receiving a high-pitched tone.

User should then hit the "carriage return" key twice to call up to the computer screen.

User can then follow the sample procedure listed below.

Note: all the upper case letters indicate the responses by the computer, while the lower case letters indicate the user's responses.

BR)

I

2

AL=ti33 (get this terminal type from the TERMINAL IDENTIFIERS lesson)

AREA CODE=331177 (enter the area code: each number will print twice)

Half (enter the word "half": each letter will be printed twice; this step is eliminated when using FULL duplex)

520br/userx (enter the entire line after the "@" prompt, with the 'x' representing the user code given by BRS at membership time)

RD=

(enter the 6-digit TELENET number assigned by BRS at membership time)

BR CONNECTED

BRS PASSWORD

XXX

(enter the BRS password assigned at membership time)

SECURITY PASSWORD

XXXXXX

(enter the security password assigned at the time of membership)

Items at sign on time are indicated by one of the following codes.



essage returns if an unauthorized password is used or the ized password is entered incorrectly. Sign off is immediate this message, and the user is automatically disconnected he system.

E0702 BRS UNAVAILABLE FOR SIGN ON

essage indicates that the system is operational but that a mas-terminal transaction is in process. The user should hang up it 10 minutes to repeat the sign on procedure.

here are no errors, the next system response may be:

XX MESSAGES PENDING IN MSGS

essage refers to a message system available through BRS the 'XX' is the number of messages pending. A complete ption of this function and how to use it will be obtained RS at time of membership.

BROADCAST MESSAGE CHANGED XX/XX/85 AT XX:XX:XX.
ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE...:

essage always appears during sign on and allows the user to my important database or system messages by typing 'y'. To these messages, the user types 'n'.

the system broadcast messages prompt, the next BRS output should be:

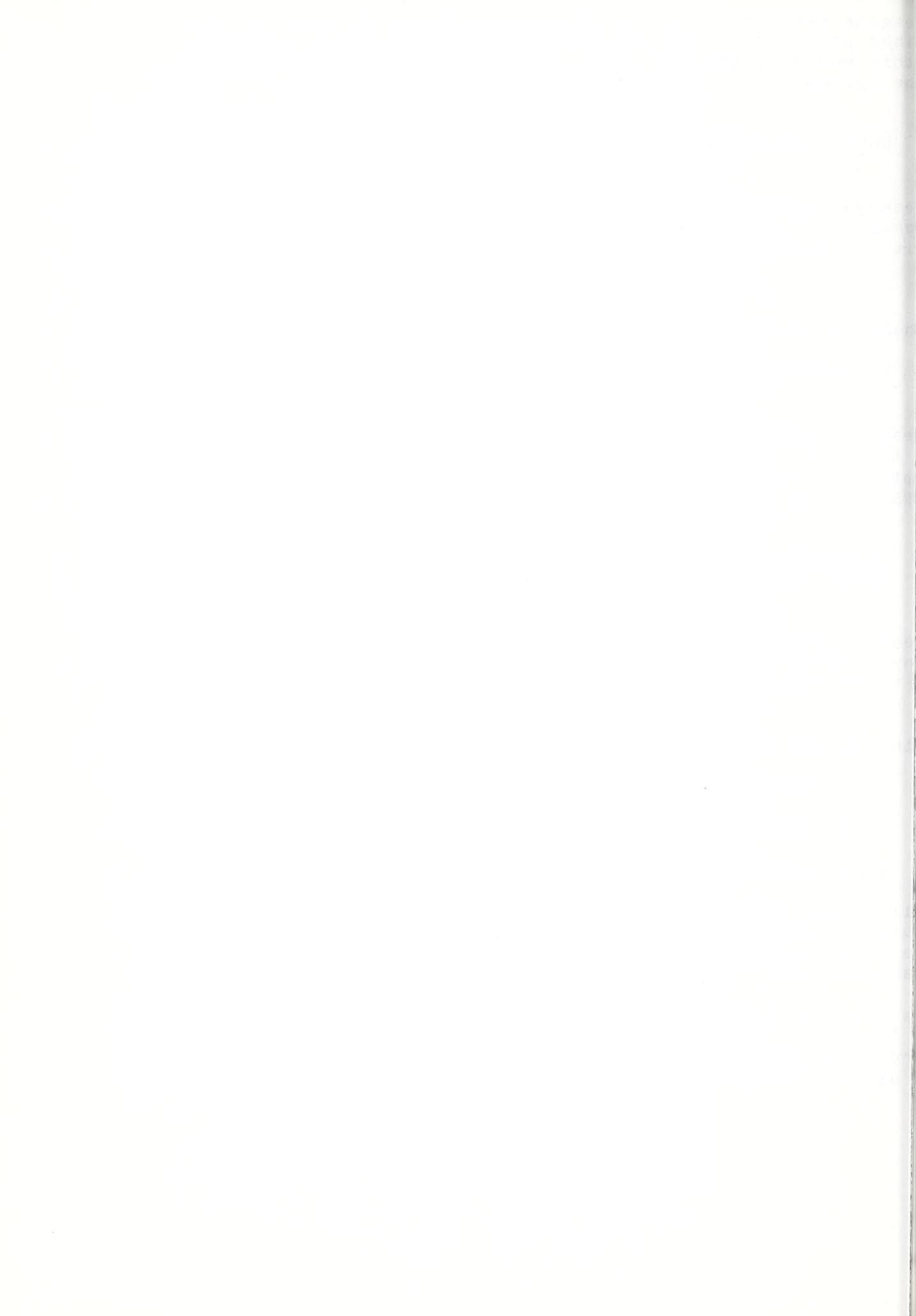
ENTER DATA BASE NAME...:

ENTER DATABASE PASSWORD

XXXXXXXXXXXXXXXX

allows the user to access a large variety of databases able through BRS. These databases vary in search costs and the information on them will be received at the time of ship to BRS.

is specific case, the 'Pork Industry Handbook' is accessed by 'half' in response to the 'DATA BASE' prompt. The security word is entered after the 'DATABASE NAME' and it too is assigned e user by BRS.



PUBLIC DIAL SYSTEM

Customer Service: 800-336-0149)

INARY INSTRUCTIONS

user may set the terminal at HALF or FULL duplex. The sample below is for access using HALF duplex.

user should dial the number of the TYMNET node for the area.

he high-pitched tone, the user should place the receiver in the for the terminal.

user can then follow the procedure listed below.

TYMNET SIGN-IN

input is all in lower case, while system responses are in ls)

TYPE IN YOUR TERMINAL IDENTIFIER: a
(enter the letter "a")

LOG IN: brs (Hit "CONTROL-h" [^h] and then type in "brs". If accessing the system in full duplex, just type in "brs".)

(depress carriage return)

TE: CALL CONNECTED

BRS PASSWORD: (this will be given to the user at the time membership to BRS is initiated)
XXX

SECURITY PASSWORD
XXXXX (enter the security password assigned at the time of membership)

ms at sign on time are indicated by one of the following es.

NAME ERROR

essage returns if an unauthorized password is used or the ized password is entered incorrectly. Sign off is immediate this message, and the user is automatically disconnected he system.

E0702 BRS UNAVAILABLE FOR SIGN ON

essage indicates that the system is operational but that a mas- terminal transaction is in process. The user should hang up it 10 minutes to repeat the sign on procedure.

here are no errors, the next system response may be:



essage refers to a message system available through BRS the 'XX' is the number of messages pending. A complete
tion of this function and how to use it will be obtained
RS at time of membership.

BROADCAST MESSAGE CHANGED XX/XX/85 AT XX:XX:XX.
ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE....:

essage always appears during sign on and allows the user to
ny important database or system messages by typing 'y'. To
these messages, the user types 'n'.

the system broadcast messages prompt, the next BRS output should be:

ENTER DATA BASE NAME....:

ENTER DATABASE PASSWORD

XXXXXXXXXXXXXXXX

llows the user to access a large variety of databases
ble through BRS. These databases vary in search costs and
e information on them will be received at the time of
ship to BRS.

s specific case, the 'Pork Industry Handbook' is accessed by
'half' in response to the 'DATA BASE' prompt. The security
rd is entered after the 'DATABASE NAME' and it too is assigned
user by BRS.



NETWORK DIAL

Customer Service: 800-821-5340)

User should set the terminal for either FULL or HALF duplex.

User should dial the Uninet number for the area and insert the n the coupler to the terminal at the sound of the high-pitched tone.

User can then follow the instructions given in the sample below.

All system responses are in capital letters while user in-
e in lower case)

(cr) (respond to the Uninet prompt with a
carriage return followed by a period
(cr) and another carriage return)

PAD
PORT

brs;a (cr) (respond to the Uninet banner by typing
"brs;a(cr)" for FULL duplex or;
"set3:0(cr) brs;a(cr)" if using HALF duplex)

0000

TED TO

5

3RS (enter the BRS password which is given to
RD the user at the time of membership)

XX XXXXX

SECURITY PASSWORD

XXXX (enter the security password assigned at the
time of membership)

es at sign on time are indicated by one of the following
es.

NAME ERROR

essage returns if an unauthorized password is used or the
ized password is entered incorrectly. Sign off is immediate
this message, and the user is automatically disconnected
he system.

E0702 BRS UNAVAILABLE FOR SIGN ON

essage indicates that the system is operational but that a mas-
terminal transaction is in process. The user should hang up
it 10 minutes to repeat the sign on procedure.



sage refers to a message system available through BRS
he 'XX' is the number of messages pending. A complete
ion of this function and how to use it will be obtained
at time of membership.

BROADCAST MESSAGE CHANGED XX/XX/85 AT XX:XX:XX.
ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE....:

sage always appears during sign on and allows the user to
import database or system messages by typing 'y'. To
these messages, the user types 'n'.
e system broadcast messages prompt, the next BRS output should be:

ENTER DATA BASE NAME....:

ENTER DATABASE PASSWORD

XXXXXXXXXXXXXXXX

ows the user to access a large variety of databases
e through BRS. These databases vary in search costs and
information on them will be received at the time of
ip to BRS.

specific case, the 'Pork Industry Handbook' is accessed by
half' in response to the 'DATA BASE' prompt. The security
is entered after the 'DATABASE NAME' and it too is assigned
user by BRS.



DIAL ACCESS

BAUD ACCESS:

User should dial 518-382-5950

The user hears the high-pitched tone. He should place the phone/modem coupler.

System will respond automatically with:

BRS PASSWORD:

(enter the password obtained from BRS at membership time)

SECURITY PASSWORD

XXXX (enter the security password assigned at the time of membership)

NO BAUD ACCESS:

User should dial 518-382-5960 or 518-382-5650

at steps 2 and 3 above.

at sign on time are indicated by one of the following messages.

NAME ERROR

Message returns if an unauthorized password is used or if the password is entered incorrectly. Sign off is immediate his message, and the user is automatically disconnected e system.

E0702 BRS UNAVAILABLE FOR SIGN ON

Message indicates that the system is operational but that a terminal transaction is in process. The user should hang up t 10 minutes to repeat the sign on procedure.

here are no errors, the next system response may be:

XX MESSAGES PENDING IN MSGS

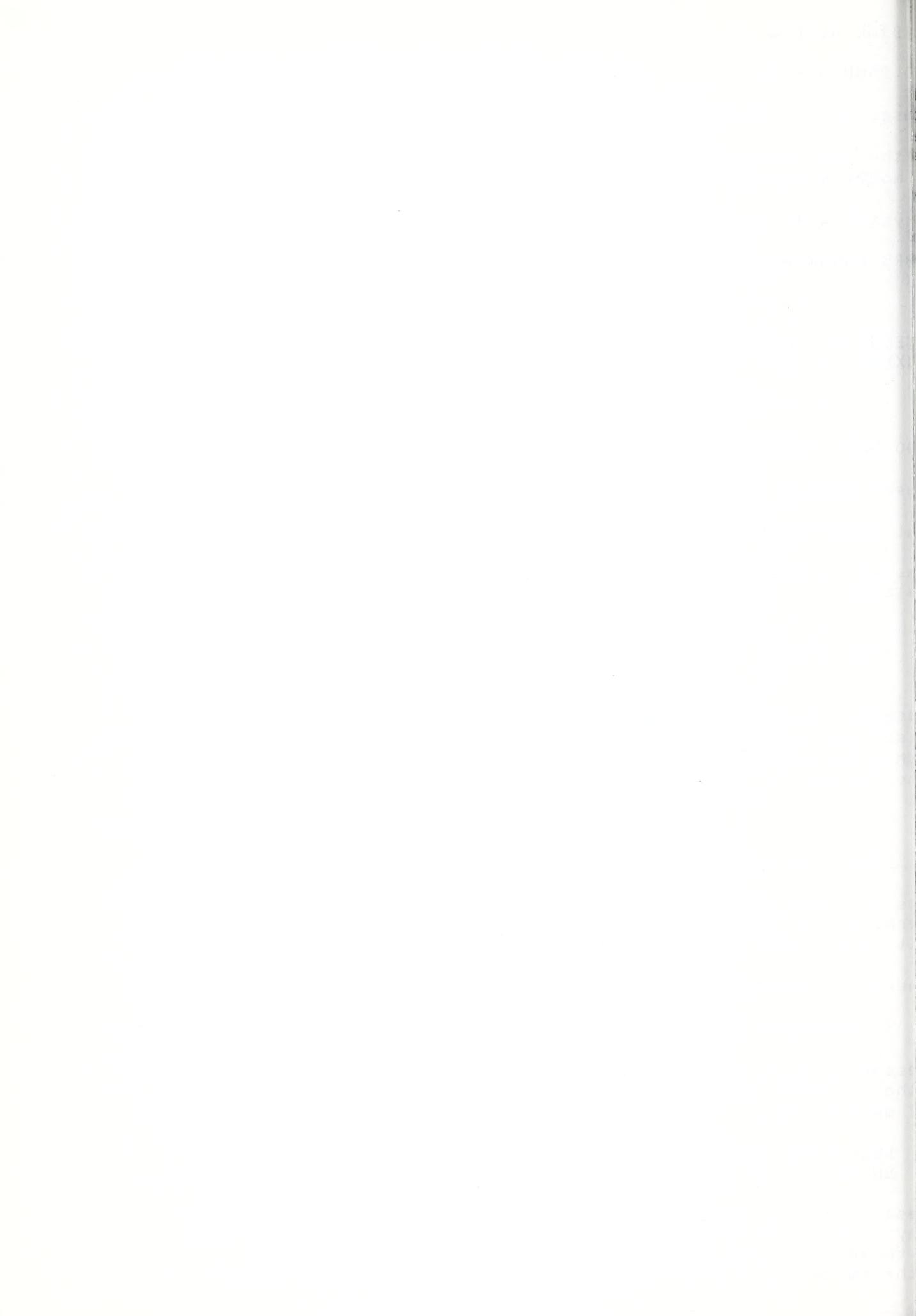
Message refers to a message system available through BRS he function and how to use it will be obtained from BRS at membership.

BROADCAST MESSAGE CHANGED XX/XX/85 AT XX:XX:XX.

ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE...:

Message always appears during sign on and allows the user to y important database or system messages by typing 'y'. To these messages, the user types 'n'.

the system broadcast messages prompt, the next BRS output should be:



XXXXXXXXXXXXXX

ows the user to access a large variety of databases
e through BRS. These databases vary in search costs, and
information on them will be received at the time of
tip to BRS.

specific case, the 'Pork Industry Handbook' is accessed by
half" in response to the "DATA BASE" prompt. The security
is entered after the "DATABASE NAME", and it too is assigned
user by BRS.

CORRECTION

rrors can be corrected by backspacing to the error and in the correct letters. Backspacing wipes out the old text and replaces it with the new entry. Backspacing can be accomplished by the 'backspace' key or by using 'control' and 'h' keys.

lines of text can be deleted by typing a question mark (?) point in the entry. The system will then delete the whole line and return with a new prompt.

o continue online printing, the user types the BREAK key. The system interrupts its display, it will return with a prompt.

at the BREAK function only serves to halt online printing. It does not stop search processing. In this program, the user must use 'control' and 'b' keys together (^b) rather than the 'break' key to halt lengthy online printing.

SEARCHING

properly entering the BRS database name 'nali' (note that ' is the lower case 'L'), the system automatically places *in the 'search' mode which should look like the follow-*

ARCH MODE- ENTER QUERY

1...:

hat the system automatically generates a statement number. This number is incremented with each new search and is im-
to keep track of.)

ng the number and prompt, the user may enter any word (keyword) ch information is needed. More than one keyword may be searched a time using various logical operators. This is complicated, user should refer to the MULTIPLE WORD SEARCH and LOGICAL RS lessons to fully understand the procedure.

lowing sample shows a possible set of queries and what the responses are. All system responses will be in upper case, the user responses will be in lower case. Note that this ion will be followed throughout the rest of the lessons.

ARCH MODE- ENTER QUERY

1...:hog

RESULT 11 DOCUMENTS

2...:smell

SMELL KEYWORD NOT IN DICTIONARY

RESULT 0 DOCUMENTS ..

example, there are 11 different documents containing the og' and no documents containing the word 'smell'. Note en a word isn't found it is reprinted so the user can re that it is the desired keyword.

tem will continue prompting for another search item until command is entered. Other commands can be entered by yping in two periods '..' and then following with the code. These commands and their abbreviations are all n the ABBREVIATION lesson, while an explanation of each is found in individual lessons by name.



user may have the results of searching displayed online using the 'print' (..p) command. After entering a search statement, the user may then request that further information be printed for any or all of the documents. A complete print statement must include three basic components which are; the statement number, paragraphs options and the documents to be printed. They must be entered in this order as shown below.

```
1...: pseudorabies
RESULT      10
```

```
2...: ..print 1 ti/doc=1
```

(the '1' indicates the statement number referred to, which in this example is obvious)

(various paragraph options can be printed; in this case the title; see the PARAGRAPH QUALIFIERS lesson)

(the 'doc=1' specifies that only the first document be printed)

At '...' will enable the system to accept other commands coming out of the search mode. To return to the search mode, 'search' or '...s'.

Statement number

This is simply the number of the search statement which the user wants more information about; it can be omitted, in which case the system will default to the last search number. For this auto-tutorial however, the statement number is to be included.

Paragraph options

Printing paragraphs individually requires only a space following the statement number and the two letter code for the option wanted.

1) The 2-letter options available for each paragraph are listed below.

an accession number (A file number used by BRS.)

oc occurrences (This results in a listing of where the search word occurs in the document by paragraph and sentence.)

au author(s) of the document

rv reviewer(s) of the document

ti title of the document

se series (Series title assigned by BRS.)



no publication number
19 language (The language the document is published in.)
nt notes (Any notes BRS may feel is important to the document.)
pt publication type
de descriptor(s) a quick description of the document
sh section heading(s)
tx text (all the body of the document)
ab abstract (This is currently not available with half.)
bibl this is a predetermined set of default paragraphs which is established by BRS for each database or can be set up by the user in the ACCT (profile) option (see the 'ACCT' lesson) (The 'bibl' for the Pork Industry Handbook includes: 'au','ti','no','de' and 'sh'.)

- 2) These paragraph descriptors can be used individually or in groups (separating each option with a comma) or they can all be printed using 'all' as an option. When using several options, they should be separated by commas but no spaces.
- 3) These descriptors (and the preformatted options which follow) are also used with the '..printoff' command which is used for printing documents offline (see the PRINTOFF lesson).

3) Preformatted paragraph options

- 1) The system also has a set of options which replace the need to type in some lengthy paragraph option choices.

FORMAT NUMBER	PARAGRAPHS
f1	an
f2	all except ab
f3	bibl
f4	ti,ab
f5	all paragraphs
f6	ti
f7	bibl,ab
f8	ti,de
f9	bibl,de

- 2) These preformatted options are used just like the regular paragraph options. They cannot be mixed with regular options, however, and they also cannot be grouped.

..print 2 f3/doc=3



of the 'bibl' for the third document listed for search statement 2)

Documents

After the paragraph options and a forward slash (/), the user enters the documents to be displayed from a search result. Following are a listing of the various options.

doc=all (All documents in the result will be displayed without stopping.)

doc=1 (The first document of the list will be displayed.)

doc=1-10 (The first ten consecutive documents in the result will be displayed; the hyphen indicates consecutive documents.)

doc=20 (Only the twentieth document in the result will be displayed.)

doc=1,5,12 (The first, fifth and twelfth documents will be displayed; the comma separates nonconsecutive documents with a limit of 25 requested at one time.)

doc=1-5,12 (The first 5 consecutive documents in the result will be displayed as well as the twelfth document.)

The BRS feature no longer requires 'doc=' to be part of the document parameter in the '..print' statement only. Only the numbers (or 'all') need to be input following the '/'. Either form will work correctly in this tutorial. An error is made in entering a specific print command will cause a system generated error message which specifies what the problem is and the user must then correct either the whole command or the correct sections as directed.

When the system has completed printing the requested documents a message END OF DOCUMENTS is transmitted. To obtain the next document in the same paragraph format, the user can simply press the carriage return which will prompt its display automatically.

When all possible documents retrieved as the result of a particular search statement have been displayed, the system message END OF DOCUMENTS IN LIST is displayed and the user can ask for another search or go back to the search mode using, '..s'.



search session has been completed and the user is ready to leave the session, logging off is accomplished by typing '..off'. The system then disconnects and gives 1) the total connect time in minutes and seconds; 2) connect time in decimal hours and 3) the off time with the date, as shown in the example below.

```
13...:..off
CONNECT TIME 0:02:05 HH:MM:SS 0.035 DEC HRS
SESSION 172*
SIGN-OFF 16.09.50 01/19/85
```

User has the option of continuing the search process later the day by typing '..off cont' (..o cont). This will cause the system to pick up the search process exactly where it was halted, providing user logs back on the system on the same day.

```
3...: diseases
RESULT 12
```

```
4...:..off cont
CONNECT TIME 1:17:51 HH:MM:SS 1.298 DEC HRS SESSION 492*
SIGN-OFF 16.39.19 10/23/84
```

(time elapses on same day and sign-on is reinitialized)

```
ENTER BRS PASSWORD
XXXXXXXX
BROADCAST MESSAGE CHANGED 10/20/84 AT 09:30:25
ENTER 'Y' OR 'N' FOR BROADCAST MESSAGE: n
RESTART IS POSSIBLE FOR DATA-BASE 'NALE'
REPLY 'Y' IF DESIRED-ELSE HIT RETURN...: y
```

```
GN-ON 17.10.24 10/23/84
/NALE/1984
- SEARCH MODE- ENTER QUERY
```

```
4...:
```

Note that the search number takes up exactly where the was left off and that the earlier search results are still in the system. They can be called back by the '..display' command which is covered in the DISPLAY lesson.



LE WORD SEARCH

than one word can be searched for at a time over the BRS. These words must generally (but not always) be separated by a type of logical operator (see the LOGICAL OPERATORS for more information).

THE ORDER OF THE LOGICAL OPERATORS

ADJ	WORD
WITH	SENTENCE
SAME	PARAGRAPH
AND	DOCUMENT
NOT	DOCUMENT
XOR	DOCUMENT
OR	DOCUMENT

acher interested in finding two words side by side and in the order
tied must use the 'adj' operator. If the words are wanted only
n same sentence, then the 'with' operator is used. If the
ords must only occur within the same paragraph, the 'same'
or is used. All the other operators ('and', 'not', 'xor' and 'or')
ith keywords in relationships within an entire document.
des of some possible searches follows.

1...: zebra or cats or dogs
ZEBRA KEYWORD NOT IN DICTIONARY

RESULT 92

For example, the key word 'zebra' was not found in the dictionary for any of the documents, but either 'cats' or 'dogs' was in 92 different documents. Note that in using the 'or' operator, only one of the terms needs to be found in the document for a count in the total results.

```
1...: zebra and cats and dogs
ZEBRA      KEYWORD NOT IN DICTIONARY
RESULT      0
```

In this case, 'zebra' again was not found in any of the documents. This yields a result of zero because now all three terms appear in a document for it to count as a hit when using the 'and' operator.

l...: costs or fees
RESULT 9535

2...: costs fees
RESULT 9535

3...: nursing and student fees
RESULT 4

In the above examples, statements 1 and 2 yield the same result because the system will read a space or spaces as an 'or' operator.



because of the preceding 'and'.

These can also be used with logical operators to delimit complicated statements as shown below.

1...: (adult adj education) and (fees or financing)

A case of nested logic where the terms 'adult education' either 'fees' or 'financing' will cause a hit if found in document. Parentheses are used any time the user wants to ensure that the system will know exactly what is intended to be searched. It is important that nesting logic be exact and correct, or an error can be produced, as shown in the example below.

1...: (adult with education) adj financing

5 SYNTAX ERROR, ADJ FOR SENTENCE LEVEL.

TER QUERY AFTER STATEMENT NUMBER

1...:

The 'with' operator asks for both words to appear in the same sentence, while the 'adj' operator demands that the words appear immediately next to each other and in the order specified. This means that to have correct logic, the operator with the highest hierarchy level must always be nested deeper than the other operators used. In the example, if the 'with' and the 'adj' were traded positions, the logic would have been correct and a search would have taken place.

Such a complicated statement might require parentheses within parentheses.

1...: (vocational-education or (adult adj education)) and fees

RESULT 16

In this case the system processes the innermost parentheses, then the outer parentheses, and finally these results will be combined with the operation outside the parentheses. Up to 5 sets of parentheses within parentheses can be entered; however, they may become too complex for the user to understand easily. Therefore it might be advisable to break these very complex search queries into several statements as shown in the example below.

1...: adult adj education

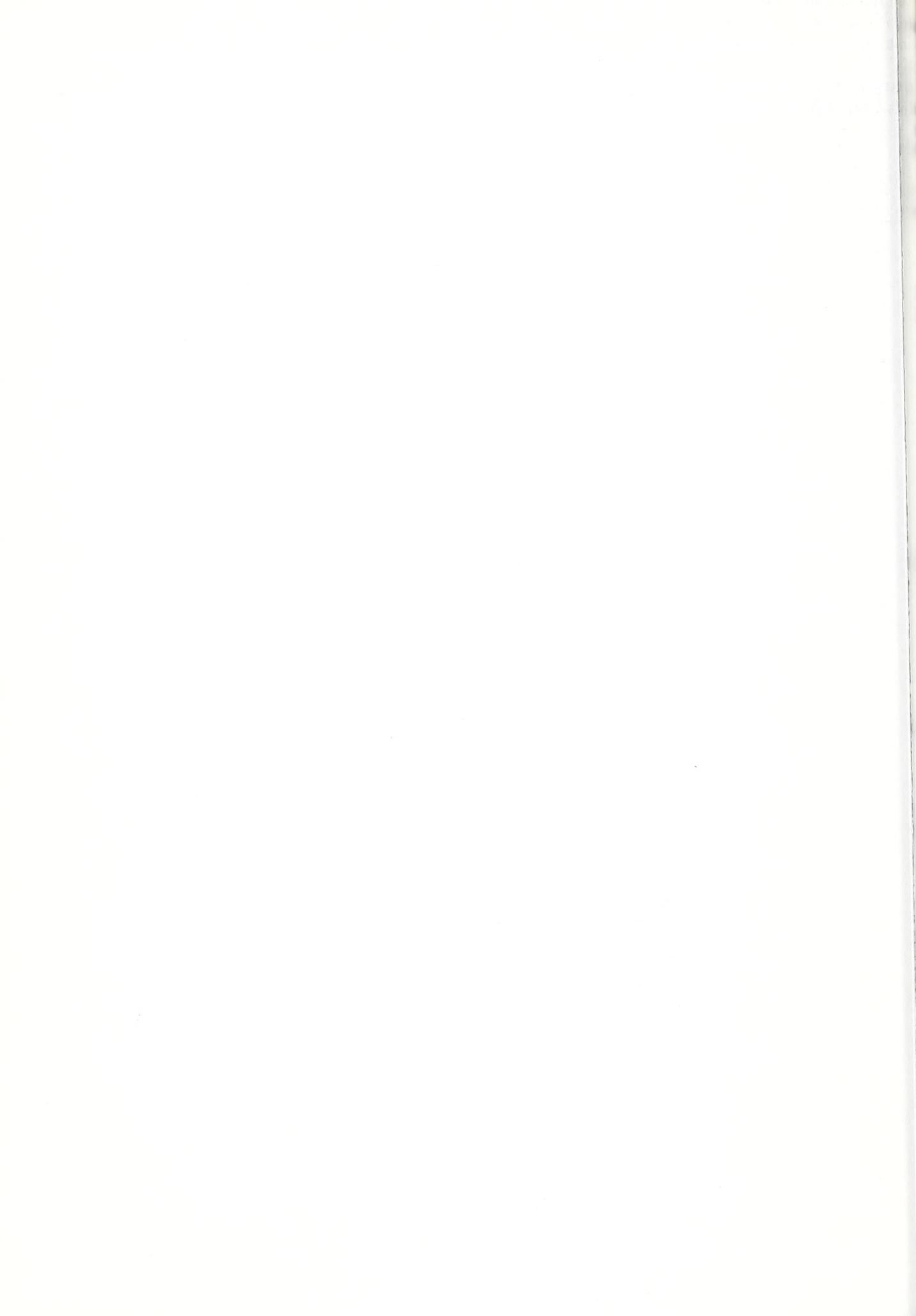
RESULT 243

2...: 1 or vocational-education

RESULT 321

s the same search statement as above. only it has been broken into three parts, with each part referring by number to the part which preceded it.

though statements may be broken into parts on the BRS system, the questions in this tutorial all require just one statement for the answer.



significant words are loaded into the dictionary file for documents. This dictionary file is where the search process usually takes place, but all of the common articles have been removed (stopped). They do not go into the dictionary and cannot, therefore, be used in a search statement. They will, however, appear when the documents are printed out so that the print will be meaningful. Following is a list of all stopwords for the BRS

IF	THAN
IN	THAT
INTO	THE
IS	THEIR
IT	THESE
ITS	THEY
***	THIS
MADE	THOSE
MAKE	THROUGH
MANY	TO
MAY	TOWARD
MORE	***
MOST	UPON
MUST	USED
***	USING
NO	***
NOT	WAS
***	WERE
DE	WHAT
ON	WHICH
OR	WHILE
***	WHO
SAME	WILL
SEVERAL	WITH
SOME	WITHIN
SUCH	WOULD
***	***



OPERATORS

Two or more words are searched for in the same search statement. They must be separated by using connectors called "operators". These operators tell the system the precise relationship that is desired between the words by the user. Below are two of operators available through the BRS system.

STANDARD BOOLEAN OPERATORS

AND	(both terms must be in the same document)
OR	(either one or both terms must be in the same document)
NOT	(a term must not appear anywhere in the document)
XOR	(either one or the other term must be in the document, but not both)

The above operators do not require any precise positional relationship between the words looked for, only that they are—or aren't present in the SAME document.

POSITIONAL OPERATORS

The terms below represent a more precise positional relationship between keywords in a search statement.

SAME	(terms must be in the same paragraph)
WITH	(terms must be in the same sentence)
ADJ	(terms must be immediately next to one another in the same order as entered)

operators must be entered exactly as shown and not abbreviated; there must also be a space before and after each term so the system will recognize them as different from the keywords.

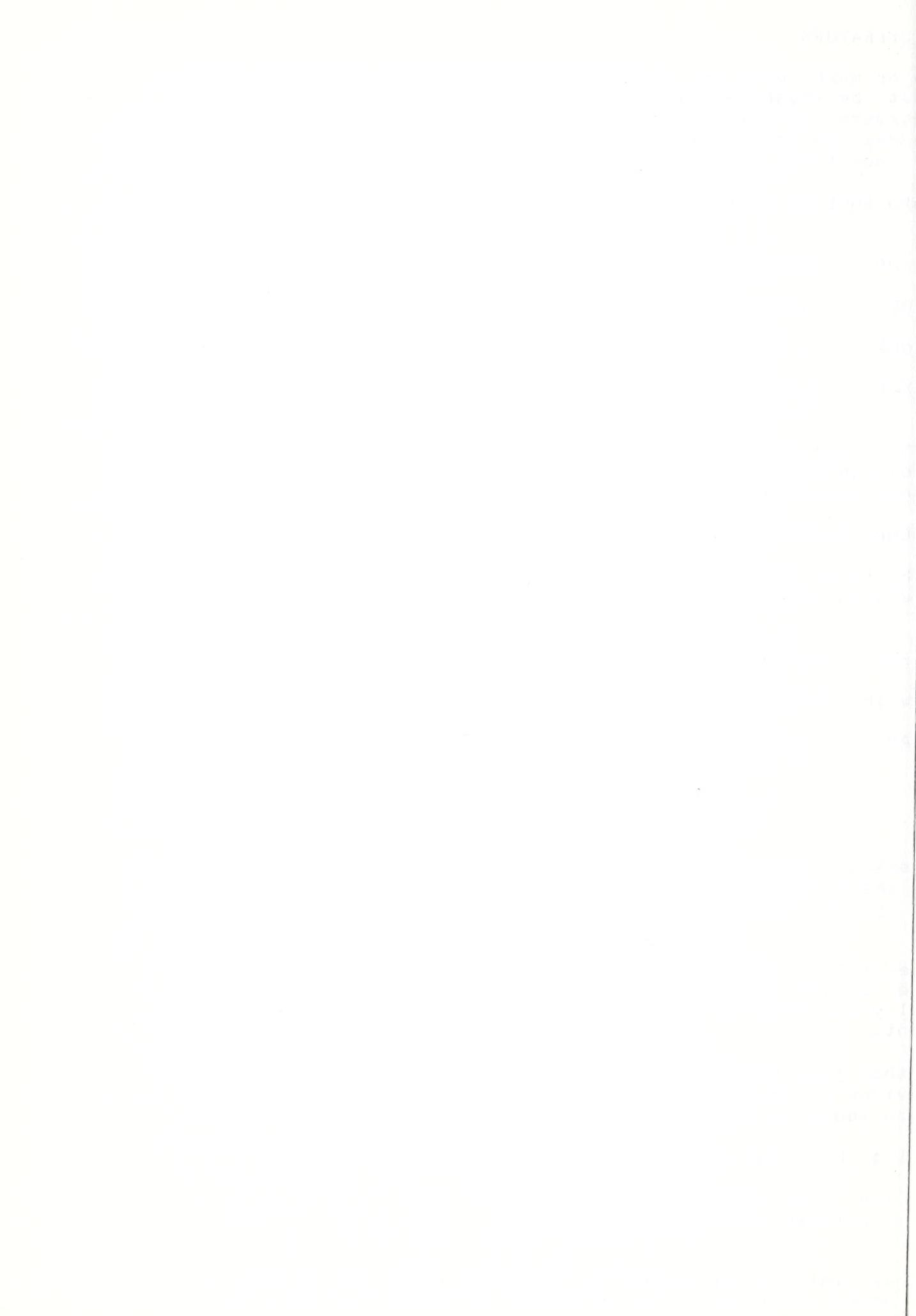
If an operator is inserted between keywords and only a space is used, the system will assume that the "OR" relationship exists. This will yield results if either or both words are found in the document.

If more than just two words are searched for and an operator is used previous to any spaces, the system will assume that any later operators are equal to the last used operator.

Example: boar and sow diseases

(an 'and' will be assumed to be used between sow and diseases)

There is no limit to the number of operators which can be used in a search statement, but no search statement can end with an operator.



the MULTIPLE WORD SEARCH lesson for more information on the logical operators.



ION

ry broad search, where everything on a particular topic is the user can use the 'truncation' feature to save repeatedly of related keywords.

cation, the symbol '\$' can be attached to any keyword or to indicate to the system that all words in the dictionary that begin with that stem are to be included in the search. '\$' should be placed immediately after the stem, with no separating it from the keyword.

```
1...: infant$  
RESULT          4695
```

ult includes searches for all words beginning with the 'stem' and includes such diverse entries as 'infants', 'icide', and 'infantry'. Every term that has been searched displayed by using the 'root' feature (see the ROOT lesson). This will help to avoid the searching for unwanted words.

words can also be avoided by restricting the number of words which may follow the stem. This is done by placing a number equal to the maximum number of characters to follow the stem immediately after the '\$' symbol.

```
1...: infant$3
```

tem will respond with all words beginning with 'infant' which have MORE THAN 3 extra characters following the keyword.

ay be times when a truncated word search results in the system finding more than 100 terms. When this happens, the system displays a message stating that there are more than 100 terms and also displays the last word searched. This is then followed by results for the first 100 terms. The user can then use the last word searched as a starting point to have the system continue searching for that particular stem.

```
1...: educ$  
1' MORE THAN 100 TERMS FOR EDUC$ LAST TERM PROCESSED  
EDUCATIONAL-GAMES  
.T      245627
```

```
2...: educ$(educational-games)
```

ystem will then continue the search for the stem 'educ', but this time it will begin with the term 'education-games'. Some stems need to be treated this way several times in order to reach all possible stems. A result for all the statements can be generated by using 'or' with all the statement numbers in the search statement (see MULTIPLE WORD SEARCH lesson).



les at BRS are periodically updated with new information. More, a feature called 'sdi' has been implemented on the which permits the user to enter a search profile online then save it for automatic reprocessing against each new update a database.

the 'sdi' command has been stored, the search profile(s) be processed each month, with the output mailed to the user.

ister an 'sdi' profile, the user enters the command, followed by the statement number, the paragraphs to be read for each document, and the user identification as below.

```
1...:swine and diseases
RESULT      94
```

```
2...:1 and (treatment or medication)
RESULT      43
```

```
3...: ..sdi 2 all/id=jones,d
QUERY HAS BEEN SAVED UNDER THE NAME OF D0002
```

he 'Q' number, which is assigned after successfully entering 'sdi' profile. This number can be used for a later edit of the profile or to cancel an SDI that is no longer needed.

ditional parameters may be included in an 'sdi' statement: 'sort' and 'expiration date' as explained below.

'sort' feature allows the user to have an SDI sorted alphabetically or numerically by a specified field. Major and minor sorts are also possible. When no sort order is specified, the sort will be ascending (A-Z or 0-9). Possible sort options are listed below.

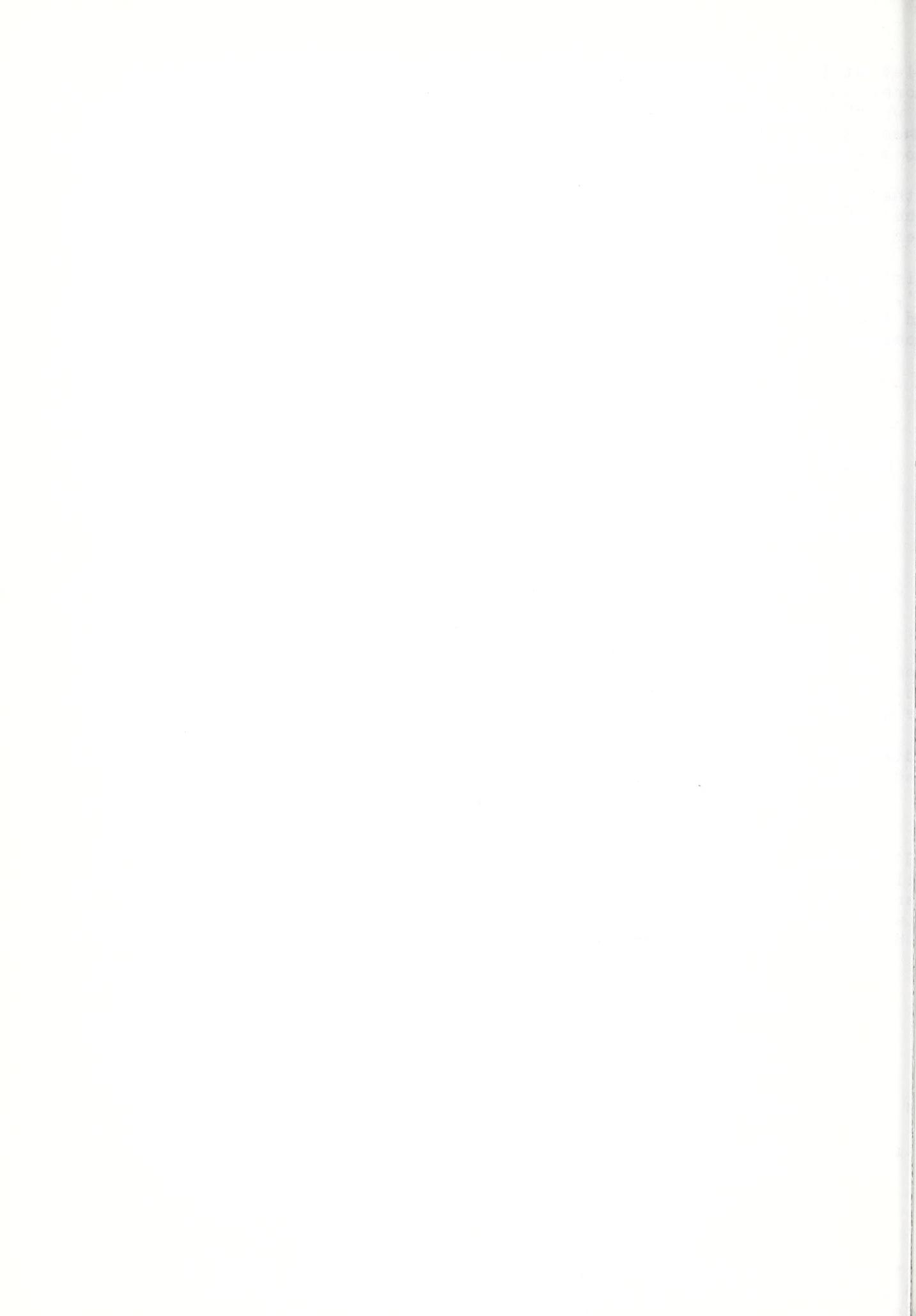
ACTION

(First 50 characters of the title are sorted in ascending order.)

d (Same as above, except descending order.)

ti (Major sort of authors in ascending order, minor sort on titles in ascending order.)

The 'sort' option is separated from the other parameters with a slash (/) and can be entered in any order after the parameter information.



3...: ..sdi 2 all/id=jones,d/50=au

parameter 'expiration date' (exp) is available and limits the at the SDI profile will remain active and in effect. This red in the format '/exp=yymm'. Note that this parameter allow a '/' and that the 'yy' equals a two number code for r and 'mm' is the numbered month code. The following exam- for an SDI that will expire in February of 1986.

3...: ..sdi 2 all/50=au/id=jones,d/exp=8602

ossible to edit an SDI profile after it has been entered omatic reprocessing. This allows the user to change any or the parameters at some later time. It requires the user to he same database in which the original SDI profile was in- and is entered as shown below.

SEARCH MODE- ENTER QUERY
1...: ...edit
R Q NUMBER
q0002
R EDIT REQUEST

number is the number that was originally assigned to the ofile and alerts the system exactly which profile the user o change. Following is a table which lists the edit command their functions.

MEANING	FUNCTION
list	(The statements which currently make up the profile are listed for review.)
change	(Terms may be inserted or deleted by indicating the statement number followed by the new terms when queried by the system.)
delete	(Entire statement numbers are deleted, subsequent statements aren't renumbered.)
insert	(New statements may be inserted anywhere in the profile, any subsequent statements ARE renumbered.)
list control	(The original 'control' details of the profile (paragraph printing specifications and ID information) are listed.)
	(Tells the system to save the modified profile.)
	(Tells the system to end the editing procedure and return to the search mode.)



onse to the '1' instruction, the system will list the
ISDI profile and then prompt for another command; note that
command is preceded by zeros.

```
ER EDIT REQUEST
1
01 SWINE AND DISEASES
02 1 AND (TREATMENT OR MEDICATION)
ER EDIT REQUEST
```

RE

er can change a line of the profile by listing the line
(without the zeros) and then following the system's prompt
the new statement.

```
ER EDIT-REQUEST
c 1
ER QUERY
  swine and scours
ER EDIT REQUEST
```

is case, the term 'diseases' has been replaced by the term
' in statement 1.

RT

er a new statement into the profile, the user must enter an
allowed by the statement number where the new statement is
1, and then the statement itself at the system's prompt.

```
ER EDIT REQUEST
i 2
ER QUERY
  1 and causes
```

view the revised profile, the user may wish to repeat the
command.

```
ER EDIT REQUEST
1
01 SWINE AND SCOURS
02 1 AND CAUSES
03 1 AND (TREATMENT OR MEDICATION)
ER EDIT REQUEST
c 3
ER QUERY
  2 and (treatment or medication)
ER EDIT REQUEST
```



ne with the earlier modification caused by the inserted
ent.

ng the 'insert' command, the user may also limit the pro-
by placing an 'l' command AFTER the inserted statement
. In this form it informs the system that the following
will be a LIMIT statement and doesn't confuse it with the
command.

```
R EDIT REQUEST
i 4 1
R QUERY
/3 pd gt 82
R EDIT REQUEST
1
01 SWINE AND SCOURS
02 1 AND CAUSES
03 2 AND (TREATMENT OR MEDICATION)
04 LIMIT /3 PD GT 82
```

above case the search will be limited to only those docu-
that are published after 1982 (see the LIMIT lesson for more
ation).

TE

on of statements is simply a matter of following the "d"
d with the statement numbers to be deleted.

```
ER EDIT REQUEST
d 2,3
ER EDIT REQUEST
1
01 SWINE AND SCOURS
04 LIMIT /3 PD GT 82
ER EDIT REQUEST
```

s case, statements 2 and 3 are deleted and statement 4 is
enumerated. The user must change the statement number that
imit" is to be acted on from 3 to 1 to complete the modifi-
s.

<more>



ified as shown in the following.

```
R EDIT REQUEST
 1 con
L
ONES.D
R EDIT REQUEST
  c p(su,ti)
R EDIT REQUEST
  c id(smith,b)
R EDIT REQUEST
  1 con
, TI
MITH,B
```

above example only the paragraphs and id had been used in control information. These were then changed by using the command and following it with either a 'p' for paragraph id' for id. The items in the change must then be placed in eses following their specifier.

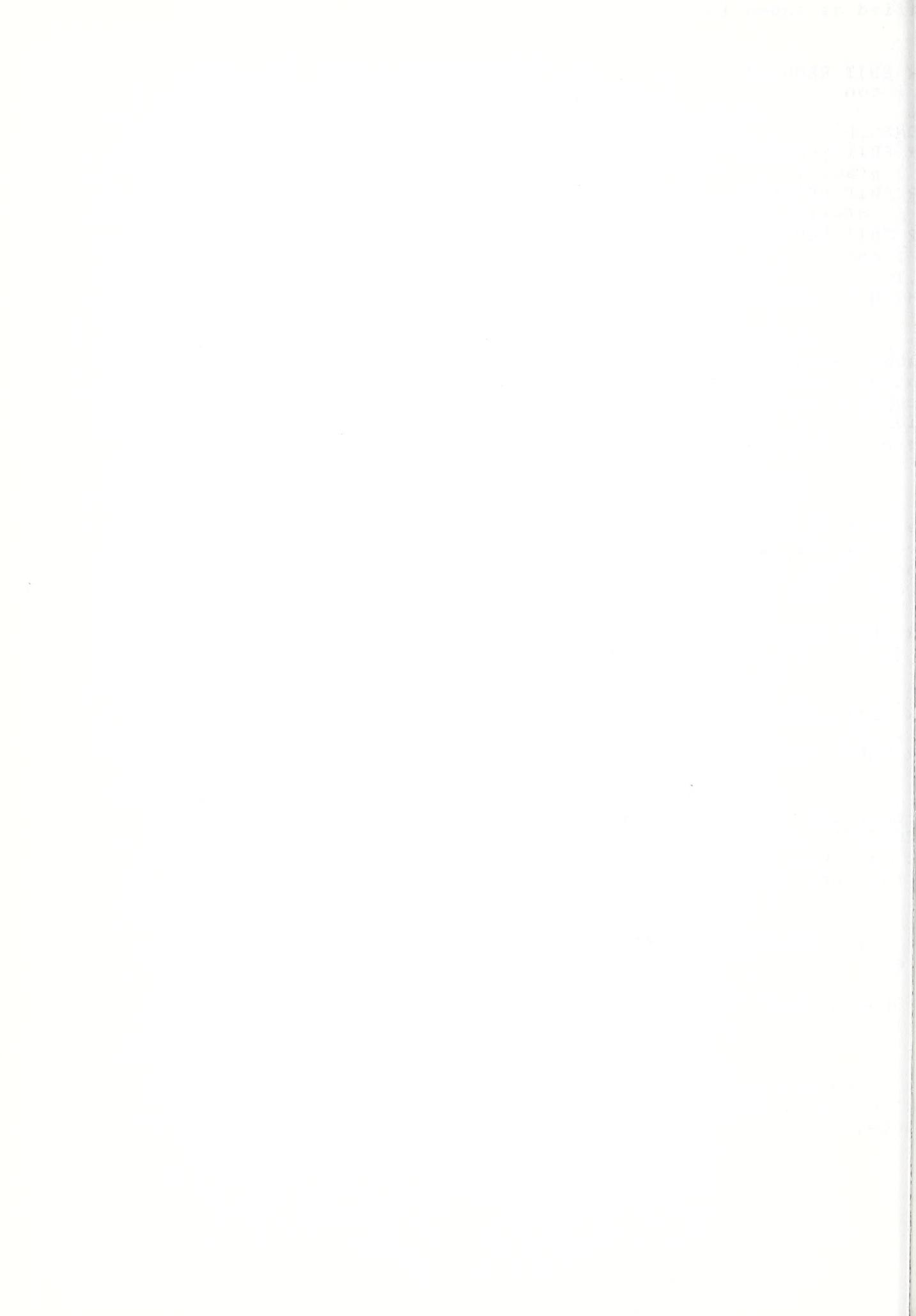
When a user is finished modifying the profile, the new profile is saved by the 'save' command. This command, however, does not cause the system to exit from the EDIT mode, which allows the user to modify other SDI profiles if desired as shown below.

```
R EDIT REQUEST
  save
D
R EDIT REQUEST
  ..edit
R QUERY NUMBER
```

When a user can end an edit session anytime there is an 'ENTER REQUEST' prompt by typing in 'end'. However, the session will not be saved unless the 'save' command was entered before the 'end' command.

```
R EDIT REQUEST
  end
S  SEARCH MODE- ENTER QUERY
  1...:
```

It is necessary to terminate the edit session after the 'ENTER REQUEST' prompt, simply enter '..s' (..search) to return to the mode.



IATIONS

all of the system commands for searching the BRS files can be
iated. This can save time on the system, and this in turn will
the user money.

	Abbreviated Command	Full Command	Abbreviated Command
re	..c	..printoff	..po
ay	..co	..purge	..pg
	..d	..save	..sv
	..ed	..search	..s
	..e	..searchoff	..so
	..l	..time	..t
	..o		
ont	..o cont		
	..p		

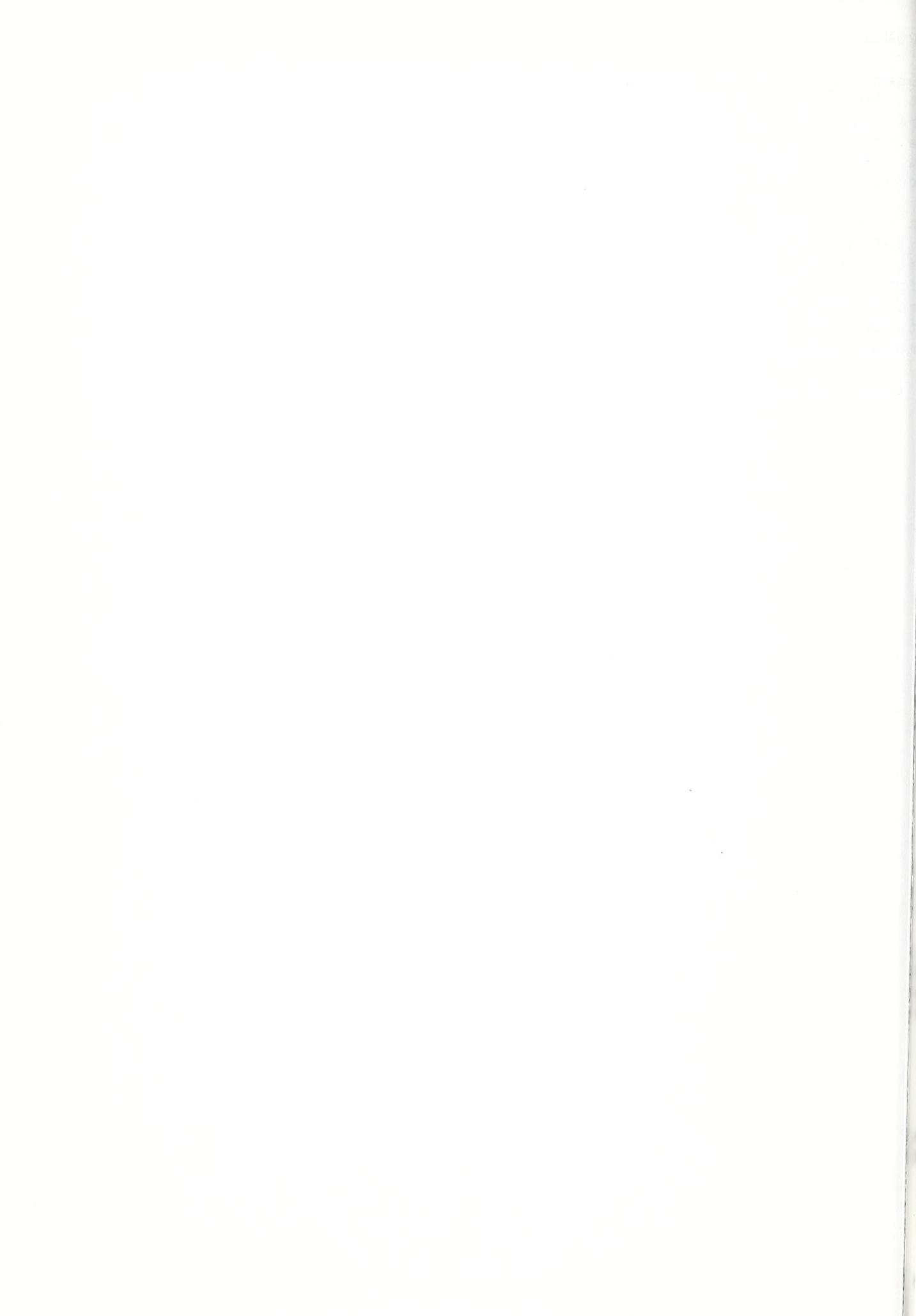


ROWSE

user wants to see some but not necessarily all of each it that is the result of a search, the following procedure be used. First hit the 'break' key and then follow it with a return. This causes the next document to automatically begin (which again can be interrupted to begin the next document on).

first types a legitimate print command and can then make the quick browse feature. It should be noted, however, that ature will automatically jump right into the next document for with no chance to enter the command mode. Therefore, if rcher has asked for 'doc=all' and there are hundreds of ts listed in a search it could be some time, even with the rowse feature, before another command could be entered.

In tutorial the 'control-b' (^b) sequence replaces the 'break' key.



STACKING

Stacking is a special feature that enables the user to
do by entering two or more commands or instructions at once.
y restriction on the number of commands that can be
is that the total statement length cannot exceed 234
ers. To stack commands, the user simply types the commands
r normal format but separates them by a forward slash (/). An
is:

```
1...: gold adj standard/..limit/l pd gt 79  
RESULT      34
```

```
RESULT      14  
SEARCH MODE- ENTER QUERY
```

```
3...:
```

the above example that the first result is given for the
s 'gold' and 'standard' but this time limited to only those
ts that were published after 1979 (see LIMIT lesson). Also note
e system reverted back to the search mode (as it should following
command) and treated the limit command as statement 2 even
it never generated the number itself.

user can use command stacking at any time while on the system.
even be used when entering into a database as in the example

```
1...: R DATA BASE NAME...: nalf/pseudorabies  
1...: -ON      15.57.28      01/20/85  
1...: NALE/1984
```

```
RESULT      10  
2...:
```

at the system signed the user into 'nalf', returned the
of the search for 'pseudorabies' and then returned to the
mode before the user had to enter any other instructions.

Finally there may occur a time when the user needs to search
terms which contain a '/'. For these instances (or whenever
user feels like it) the system can have the stacking symbol
changed to another character via the '...set stack=' command.

```
1...: swine  
2...: ..set stack=*&  
3...: BEEN COMPLETED  
4...: SEARCH MODE-ENTER QUERY  
2...: ..print l ti/doc=l*&..limit/2 pd = 84
```

above example the searcher used the '*' instead of the '/',
many commands already require the '/', and this might



may want to refine a search by limiting the results by
icular parameter. The '..limit' (..l) command is used
narrow the scope of a search. The most common limiting
re language (lg), publication date (pd) and update code (up).
limit' command must include four parameters which appear after
d slash (/) in the order shown below.

search statement number which is to be limited.

abbreviation for the limiting item such as 'lg', 'pd'

limit operator which specifies how the field will be lim-
These operators can be used in either the two letter code
symbol form, both of which are given below.

OPERATOR	SYMBOL	MEANING
eq	=	equal to
ne	<no symbol>	not equal to
lt	<	less than
gt	>	greater than

criteria is the actual data which limits the search
ies to specific years or languages. To define this code
o letters or numbers such as '81' for 1981 or 'en' for
are necessary.

ng are several examples of the '..limit' command and explanations
each command will do.

/1 pd gt 79 (limits the search in statement 1 to
only those items which were published
in years greater than 1979)

/1 lg = en (limits the search in statement 1 to
only those documents which are written
in english)

/1 lg eq en,fr,gr (limits the search in statement 1 to
only those documents which are written
in either english or french or german)

<more>

the BRS databases, new documents are added on a regular
basis; this is called updating. Each document which is added



even though the code itself will not appear in any actual
of the document. Following are examples and explanations
'update' parameter as the limiting factor.

```
/1 up = 80$    (limits the search in statement 1 to retrieve  
only those documents updated in 1980 [Note  
the '$' which is explained in the TRUNCATION  
lesson.])
```

```
/1 up gt 80$   (limits the search in statement 1 to retrieve  
only those documents which were updated after  
1980)
```

```
/1 up = 8001   (limits the search in statement 1 to only those  
documents which were updated in January 1980)
```

note code 'up' should not be confused with the publication date
accessed using the 'pd' paragraph label. The 'up' label will
the system that the user wants the date the document was entered
system, while 'pd' refers to the date the document was published.

possible to limit more than one field of operation in
a limit statement by using the standard boolean operators
(LOGICAL OPERATORS lesson) as shown below.

```
/1 lg = en and pd > 73   (limits the search in statement 1 to only  
those documents which are both written in  
english and published after 1973)
```

in the limit statement will generally return a system
indicating which of the four parameters is incorrect.
option is when the last parameter (the criteria) is en-
incorrectly. In this case, the system will generally return
1 search result statement with zero documents found;
ould alert the user to check the last parameter.

he '..limit' operation has been performed, the system will
ically return to the search mode and generate the next
nt number.



system contains many more database files than just the Industry Handbook, and a complete list of these files can be found at the time of membership. The user should be aware that some of these databases have an additional charge associated with them when they are searched. The user can change to a database at any time by typing '..change' or '..c'. A change to another database would look like this:

```
5...: ..change  
2 ENTER DATA BASE NAME...: mgmt  
EECT TIME 00:05:30 0.094 DEC HRS SESSION 199A  
MGMT/1974-JAN81  
SEARCH MODE- ENTER QUERY  
1...:
```

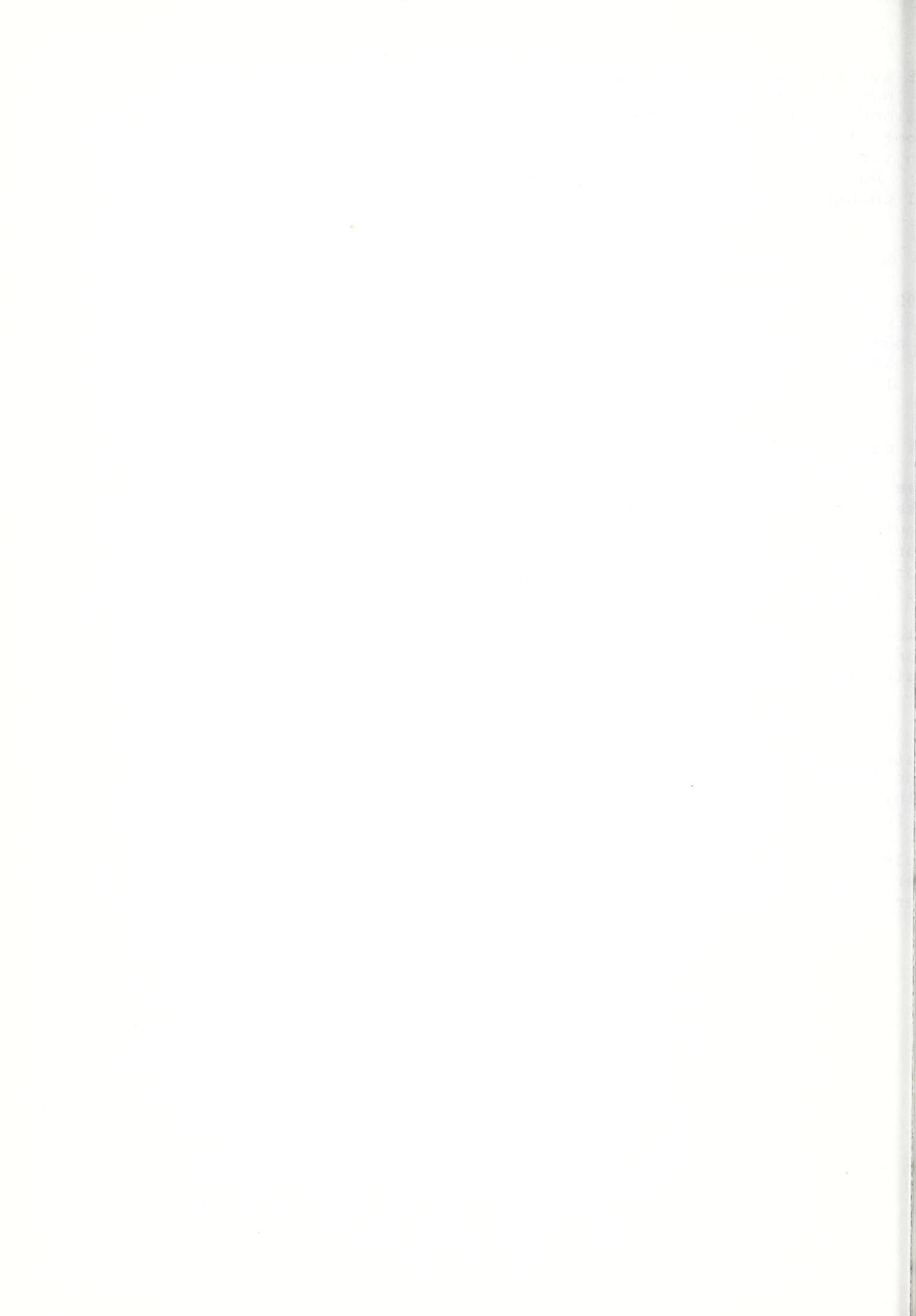
In case the user made a change to the 'mgmt' database. The system automatically prints out the connect time to the previous database and enters the user into the search mode for the new database. When the user changes from one database to another, the data held in the previous database will be erased. Therefore, if the user wants any previous search statements held for processing in the new database, they must employ the 'c' command before the '..change' command is given.

Another way can be used in the '..change' command where the database name that the user wants to enter is incorporated by using a slash. Using this method, the command would appear as follows:

```
5...: ..change/mgmt
```

The system will then respond exactly as before with the exception that the 'ENTER DATA BASE NAME...:' prompt will no longer be displayed. This shortcut is called 'command stacking', and more information can be found in the 'COMMAND STACKING' lesson.

It should be noted that the user must be authorized by BRS to be able to enter other databases. This arrangement can be made at the time the user signs up with the system.



'printoff' (..po) command is used when the user wants to have results of a search printed offline and mailed the next morning to the address in the account profile (see ACCT).

3.: ..printoff 2 ti/doc=all/id=smith,john

above example all the titles for all the documents found in statement 3 are printed offline with the name SMITH, JOHN on page of the printout.

format of the '..printoff' command includes four basic parameters:

search statement number

is number may be one or two digits and is entered directly after the '..printoff' command.

paragraphs to be printed for each document

rectly after the statement number and a 'space, the user specifies which paragraphs are to be printed for each document.

-) 'all'- (All paragraphs available for documents in this database, including the abstracts, will be printed.)
-) 'xx'- (Only specific paragraphs [may be more than one type separated by a comma] represented by 'xx' will be printed.) (see the Paragraph Options section of the PRINT lesson)
-) "bibl"- (The standard default paragraphs predetermined by BRS or the user via the ACCT (profile) will be printed. For the Pork Industry Handbook the 'bibl' includes 'au', 'ti', 'no', 'de' and 'sh'.)
-) 'f#'- (Any of the preformatted options found in the PRINT lesson may also be used. '#' is any of the 9 option numbers.)

number of documents to be printed

-) doc=all (All documents (up to 1000) which qualified for the search statement will be printed offline.)
-) doc=1-10 (Consecutive documents numbered 1 through 10 will be printed offline.)
-) doc=1,3,7 (Only those documents individually identified and separated by commas are printed offline.)

'printoff' command still requires the 'doc=' portion of the documents number to be used even though it may be skipped when printing online with the '..print' statement. This tutorial will accept both forms when used with the '..print' command.

patron or client identification information

This parameter is used following the document selection command.



nd will appear on the front sheet of each unique offline search.

This parameter is not to be used to enter the address to which the offline search is to be sent as this information is already stored in the master account of the user (see ACCT lesson).

typical entry and how the entry will appear on the printout follows.

```
/id=smith,john;biology dept,room 12;494-1200
```

SMITH,JOHN
BIOLOGY DEPT,ROOM 12
494-1200

semicolons (;) are omitted from the entry and replaced by then the printout will all appear on one line. The semicolon tells the computer to start a new line each time, and it also adds maximum 233 character count total.

using or incorrect parameter will cause the system to with an error message which states what was missing. The user only needs to re-enter the incorrect parameter and not the statement again.

offline statement has been entered correctly, the system knowledge that the request has been saved and automatically an identification number.

YOUR OFFLINE QUERY HAS BEEN SAVED UNDER THE NAME OF Q0001

umber beginning with 0001 is automatically assigned to offline query and continues up to Q9999. These numbers will each query with its own unique identification number, and be needed for later reference to the saved statement.

can request printoffs from up to 3 different statement with the same ".printoff" command. In the statement number the printoff command, simply enter the statement numbers separated by commas and no spaces. The searcher will receive printouts for each statement number, but the system assigns only one Q number.



0 'A'

and 'A' are both special time saving devices that are used in the PRINT mode.

document is generally broken into numbered paragraphs and graphs. The 'hits' command is used in the paragraph option of the '..print' statement. It will print only those paragraphs in which the word actually occurs.

3...: ..print 1 hits/doc=1

will print all the titles, paragraphs and subparagraphs in document 1 containing the keyword searched in statement 1.)

command is generally (but not always) associated with the occurrence) paragraph option because it is linked to the document displayed; it can only be used after a print has already been executed. Examples of the 'oc' option 'A' command follow.

<more>

1...: solar

RESULT 2

2...: ..p oc/doc=all

1
RGRAPH SENTENCE NS-WORD
TX (3) 25 69
TX (3) 26 5
TX (3) 26 20

2
RGRAPH SENTENCE NS-WORD
TX (20) 2 55
TX (22) 4 12

...: A tx(20)

In the above example, the system will respond by printing the text (tx) of the paragraph numbered 20 for the second document.



the '*' command only responds to the last document, document needs to be accessed with another '..print' command. Paragraph number can still be utilized to limit the amount of printed:

3...: ..p 1 tx(3)/doc=1

y paragraph 3 in document 1 will
printed.)

and 'hits' commands can be used together when the last document contains several different numbered paragraphs contain the key word:

...: * hits,ti

at a space must always follow the '*' and that more options can be added by separating each option from the others by a



the commands for the system utilize the search number of
icular statement. When the user has a large number of
, the search numbers might be lost because of screen scroll-
All of the search numbers and their results can be re-
by the ".display" (.d) command. An example of what
mmand will do follows.

<more>

```
1...: disease
RESULT      10
2...: pseudorabies
RESULT      2
3...: ..display all
CASE
      10
PDRABIES
      2
*****END OF DISPLAY*****
SEARCH- MODE- ENTER QUERY
3...:
```

at the system automatically places the user back in the
mode and repeats the last search number..

ng is a list of all command options with ".display".

```
ay           (statement immediately previous is displayed)
ay 1         (statement 1 is displayed)
ay 1-3       (consecutive statements 1 through 3 are displayed)
ay 1,3       (statements 1 and 3 are displayed)
ay all       (all outstanding statements are displayed)
ay 00005     (specific offline statements such as ..printoff,..sdi
              and ..searchoff are displayed)
```

<more>

```
ay type(XXX) (this feature displays the following where XXX is
              the first code:
```


- (sdi) entered for past 10 days is displayed
 - a list of all Q numbers for stored SII profiles is displayed
- (po) - a list of all Q numbers for the printoffs is displayed

(a temporary savesearch is displayed with XXX being the name of the temporary savesearch)

(a permanent savesearch with the name represented by XXX is displayed)



MAIL

s a command on the system that can be used when there are
e words to be searched in the same statement. This command
et detail=on'. When this command is invoked, the system will
the results for each individual term following the name.

```
1 : ..set detail=on
$ BEEN COMPLETED
SEARCH MODE- ENTER QUERY
1 : nursing or health
    NURSING          2219 DOCUMENTS
    HEALTH           24255 DOCUMENTS
RESULT      26474
```

<more>

'set-detail=on' command causes the system to state that
has been executed, and the user is automatically
ed to the search mode. Each multiple search from that point
ill return the results for each individual term as well as
dal for all terms.

er can then turn the 'set detail' command off by entering
command the command shown below.

```
3 : ..set detail=off
$ BEEN COMPLETED
SEARCH MODE- ENTER QUERY
3 : nursing or health
RESULT      26474
```

the 'set detail' command off again gets a system response
his 'set' has been executed, and only the results for the entire
will again be displayed.



'purge' (..pg) command is used to delete outstanding search it statements and the document lists produced by those nts. It can also be used to cancel offline print and statements any time during the day of original entry, or el stored SDI profiles at any time. Finally, the '..purge" used to delete temporary or permanent savesearch labels.

queries cannot be recalled or referenced again. However, arch has been previously saved, then it will not be purged '..purge' command; even the command '..purge all' doesn't the saved searches. Following is an example of using the e' command and the system response.

<more>

```
1...: hog
RESULT      10

2...: boar
RESULT      16

3...: ..purge 1-2
QUERIES HAVE BEEN PURGED.
```

ng is a listing of the various ways to purge different in the system.

(The immediately previous statement number will be purged.)

1 (Statement 1 will be purged.)

1-10 (Consecutive statements 1 through 10 will be purged.)

1,5,9 (Selective and nonconsecutive statements 1, 5, and 9 will be purged.)

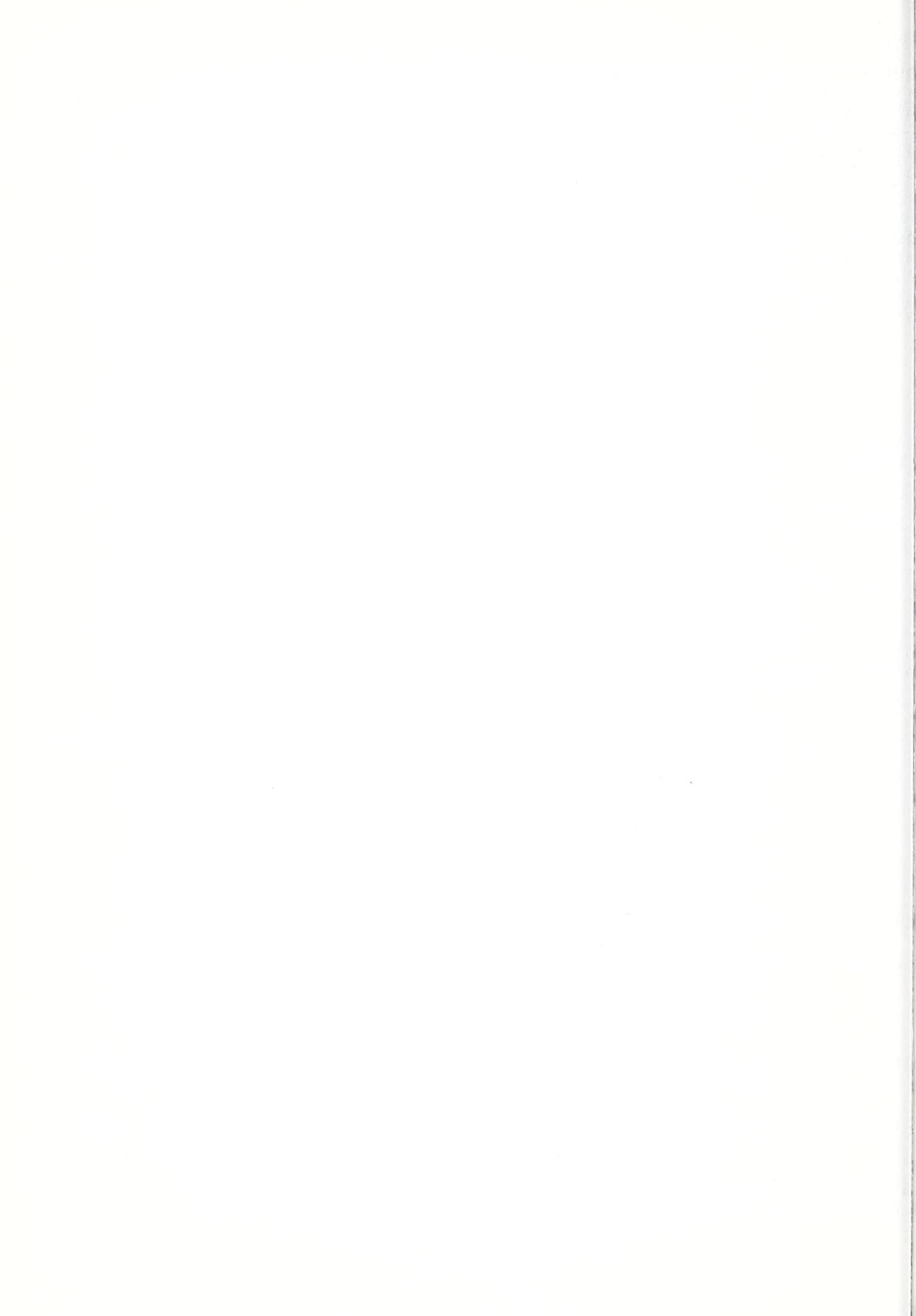
all (All outstanding statement numbers will be purged.)

Q0005 (Specific PRINTOFF and SEARCHOFF items will be purged if entered during the same day as they were originated; specific SDI profiles can be purged at any time. Note that the 'Q' numbers must each be purged separately.)

XXX (A temporary save will be purged where 'XXX' is the name of the temporary save.)

ps(XXX) (A permanent save with the name represented by 'XXX' will be purged.)

hat merged queries which are assigned an 'M' number by the can only be purged by purging individual "Q" numbers.



RS ONLINE ACCOUNTING SYSTEM)

online accounting system (called AMIS) is available to the BRS system. This record contains usage statistics for each user as well as a master record having an offline mailing address, telephone number, terminal type and other information the user may update at any time.

User's record is updated nightly with statistics from the day's activity so that the usage statistics are always accurate.

User can access the AMIS online accounting system at any time using command:

```
ENTER DATA BASE NAME...: acct
```

User the user has been on the system for awhile:

```
16...: ..change/acct
```

Item will then ask the user to specify one of five possible types of inquiry; 1)database name, 2)total, 3)all, 4)master or file:

```
SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE
```

onding with a database name such as 'nalf' (Pork Industry book) will generate usage statistics for that file.

onding with 'total' will generate the total usage statistics for all databases used in a summary form.

onding with 'all' will generate a long summary by database individually as well as provide a total summary.

is an example using 'nalf' as a response:

```
SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE  
nalf
```

AGE	USER=SAMPLE	DATABASE=NALO	2/15/85					
ONHRS	OFFCIT	PRTCIT	SDICIT	OFFPG	PRTPG	SDIPG	SDIRUN	OFFQS
01.97	000000	003230	000000	00000	00146	00000	000000	00007
25.35	000039	005689	000000	00000	00567	00000	000000	00018
01.03	000000	000023	000000	00000	00023	00000	000000	00002

is a list of all the abbreviations used in the statistical report:

- total number of online connect hours
- total number of citations resulting from searchoffs
- total number of citations resulting from printoffs
- total number of citations resulting from stored SDI's



- total number of pages printed for stored SDI's
- total number of SDI's processed
- total number of query numbers processed
- usage incurred in each category the PREVIOUS month
- accumulated monthly totals in each category SINCE JANUARY
- current accumulated usage in each category for CURRENT month

Response of 'master' will prompt a display of the master which includes; type of contract, hours used, dollar telephone number, offline mailing address and billing ad-

Response of 'profile' will allow the user to change various in the master file. An example follows.

```
SPECIFY DATABASE-NAME, TOTAL, ALL, MASTER, OR PROFILE
profile
ENTER # CORRESPONDING TO CHANGE
1: OFFLINE MAILING ADDRESS 2: PARA BIBL 3: TERMINAL TYPE
4: TELEPHONE # 5: SEARCH ANALYST 6: END PROFILE
7: PASSWORD 8: ONLINE COST
```

User can then enter a number from the menu to alter the information already on file. A brief explanation of each of the items follows.

OFFLINE MAILING ADDRESS- This is the address where all offline requests are sent.

PARA BIBL- This is the default printing paragraph(s) (BIBL). User can specify their own default paragraphs which will be used when using the 'bibl' indicator in conjunction with a ..printoff, ..searchoff or ..sdi command.

TERMINAL TYPE- The type of terminal used can affect some aspects of searching; thus, users should update this information when they use new terminals. The designation, which should not be longer than 9 characters long, can be found in the TERMINAL TYPES lesson.

TELEPHONE #- The phone number should be placed in the file using any slash marks, hyphens, or spaces; the area should be included at the front.

SEARCH ANALYST- This is the name of the principal searcher of files.

PROFILE- This is an escape from profile if the user has accidentally gotten placed in the 'profile' menu.

PASSWORD- The user can safeguard against possible misuse of the password by adding his own AMIS password. This will cause an password prompt at every login session immediately after the password prompt.



ct' session can be terminated by a '...change' command to
database.

a special operator which asks the system to display all entries in the Dictionary file that begin with a particular 'root' or stem. When the user is in the search mode, is entered by typing the word 'root' (with no preceding), then a space and then the key word stem.

SEARCH MODE- ENTER QUERY

l...: root infant

INFANT\$

INFANT	1728 DOCUMENTS
INFANT-BEHAVIOR	681 DOCUMENTS
INFANT-MORTALITY	84 DOCUMENTS
INFANT-TODDLER	1 DOCUMENTS
INFANT/CHILD	2 DOCUMENTS
INFANTE	2 DOCUMENTS
INFANTE-DOMINIQUE-A	10 DOCUMENTS
INFANTE-ISA	1 DOCUMENTS
INFANTE-MARK-M	1 DOCUMENTS
INFANTE-MARY-SUE	1 DOCUMENTS
INFANTICIDE	1 DOCUMENTS
INFANTIL	4 DOCUMENTS
INFANTILE	68 DOCUMENTS
INFANTILES	2 DOCUMENTS
INFANTILISM	3 DOCUMENTS
INFANTILIZATION	4 DOCUMENTS
INFANTILIZE	2 DOCUMENTS
INFANTINE-T-STUART	2 DOCUMENTS
INFANTINO-ROBERT-LOUIS	1 DOCUMENTS
INFANTRY	15 DOCUMENTS
INFANTRYMAN	1 DOCUMENTS
INFANTRYMEN	2 DOCUMENTS
INFANTS	1879 DOCUMENTS
INFANTSAND	1 DOCUMENTS
INFANTSS	1 DOCUMENTS

parate term in the root display has an 'r' number assigned and is followed by the total number of documents in the e that contain that term. The 'r' numbers can be thought of erence numbers, and the user can refer back to them in the strategy. Consecutive terms can be retrieved by using of numbers with hyphens between, and nonconsecutive with spaces between as shown in the example below.

l...: r1-r3 r13 r15 r23

RESULT 2678

tem reads the spaces between the nonconsecutive numbers 'or' and also will read an 'or' between each consecutive ber in the search. When the user has a new 'root' search he old 'r' numbers are deleted and are replaced with a new 'r' numbers.

the 'r' numbers can be mixed with regular keywords and r' numbers using the boolean and positional operators (see TUTOR OPERATIONS).



3...: r11 and statistics

would result in a search for all documents containing the words, 'statistics' and 'infanticide'.

'root' function will only number and display the first 100 processed; if there are more than 100 terms, then the system produces an error message which states what the last term used was. This allows the user to enter another 'root' command to retrieve the rest of the terms.

1...: root burn
BURN\$

47 MORE THAN 100 TERMS FOR BURN\$
LAST TERM PROCESSED WAS BURNS

THE SYSTEM PRINTS OUT THE RESULTS FOR THE FIRST 100 TERMS)

1...: root burn(burns)
BURN\$
BURNS 486 DOCUMENTS
BURNS-DONALD 1 DOCUMENT

DO SO ON UNTIL ALL ROOTS FOR BURNS ARE PRINTED

That the 'root' term followed immediately by the last term used in parentheses causes the 'root' function to continue. Only the last set of 'r' numbers can be referred to in search statements.

To search the key word 'root' itself, the user must surround it with single quotes exactly as shown below.

1...: root 'root'

Will cause the system to look for all words with the stem 'root'.

H QUALIFICATIONS

in the PRINT lesson, there are many two letter labels
g to various paragraph options. These paragraph options
n below with a brief explanation.

an accession number (A file number used by BRS.)
oc occurrences (This results in a listing of where the
search word occurs in the document by paragraph and
sentence.)
au author(s) of the document
rv reviewer(s) of the document
ti title of the document
se series (Series title assigned by BRS.)
cn call number
no publication number
lg language (The language the document is published in.)
nt notes (Any notes BRS may feel is important to the
document.)
pt publication type
de descriptor(s) a quick description of the document
sh section heading
tx text (all the body of the document)
ab abstract (This is currently not available with malf.)
bibl This is a predetermined set of default paragraphs
which is established by BRS for each database or can
be set up by the user in the ACCT (profile) option.
(For the Pork Industry Handbook the bibl includes:
"au","ti","no","de" and "sh".)

options can be used to "qualify" what levels should be
in a standard search statement. As shown below, they
add to the search statement by placing a period immediately
before the term(s) to be searched and following it with the appropriate
option and another period.

l...: nursing.ti.

will cause the system to search for the term 'nursing' only
titles of all the documents. Multiple qualifiers can also
be separated them from one another with a comma (again,
it must end the statement).

l...: nursing.ti,ab.

g' in only the titles and the abstracts of all the docu-

r can also qualify after-the-fact by using the preceding
nt number.

1...: nursing
RESULT 2219

2...: 1.ti.
RESULT 682

above example, the second search is qualified by using the
statement number and a qualifier. This search only looks in the
ts' titles for the term(s) in search statement 1.

Multiple word searches, qualification after-the-fact can only be
when 'or', 'same', 'with' or 'adj' have been used in the preceding
ent. If 'and', 'not', 'xor' or '..limit' are used in a statement,
hat statement cannot be qualified after-the-fact.

er can also request negative qualification by preceding
eagraph qualifer with two (2) periods instead of one.

1...: nursing..ti.

will tell the system that the user wants to find all documents
contain the word 'nursing' anywhere except in the title.

raph qualifiers can also be used to specify exactly what specific
nformation about a document is to be printed in a print statement.

2...: ..print 1 ti/doc=1

will print out only the title of the first document found in
statement 1.

paragraph qualifiers can be added by separating them with commas.

3...: ..print 1 ti,sh,tx/doc=1

will cause the title as well as the section headings and all text
printed out for document 1 found in search statement 1.

'save' (...s) command allows the user to store search statements in the computer and then execute them at a later time. The search statements are referred to as 'savesearches'. A temporary save may be saved for recall at some time later that same day (a temporary save) or for processing on a future day (a permanent save). A savesearch is run by using the '...exec' command (see the EXEC lesson). Examples of the temporary and permanent saves follow:

Temporary save: (XXXX) ("XXXX" is the four character label chosen by the user to identify this temporary save.)

Permanent save: (s(XXXX)) ("XXXX" is the four character label chosen to identify this permanent save.)

Restrictions on the label are that it doesn't exceed 4 characters and that at least one of the characters must be alphabetic. If the user happens to request a label that is already in use, the system will serve notice that this is the case and allow the new label to be changed or the old savesearch to be saved and replaced by the latest one.

It should be noted that the '...exec' command is used to execute a search (see the EXEC lesson). Execution can only take place if statement numbers that have been saved are greater than the statement number where the '...exec' command is initiated. Therefore, a good procedure for saved searches may be to be at least at statement number 3 before saving a search; then the user can make '...exec' the saved search when at search statement 1. (see the EXEC lesson for more information on returning to statement 1).

exec' (..e) command notifies the system that the user
to have a query that was previously saved executed against
rent online database. The saved queries can be called up
ng:

XXXX where XXXX is the label assigned by the user to a
query that has been temporarily saved

ps(XXXX) where XXXX is the label assigned by the user to
queries that have been permanently saved

exec' command is most often used when the user wants to
ite a search against a new database.

<more>

at the 'exec' command only works when the beginning statement
s of the saved search are greater than the statement number
he searcher is currently using. See the 'SAVE' lesson for more
ation.

cost'(..co) command can be used to get an estimate of the costs of services provided for the session so far. The will provide estimates of online connect hours (OHRS), database es (DB-ROY), communications (COMM) and a total (TOTAL) for the e that the user is currently in. Following is an example of the unction and the system response.

```
4...: scours
RESULT      25

5...: ..cost
NALE COST:
OHRS...$.16    DB-ROY...$.00    COMM...$.02      TOTAL...$.18
SEARCH MODE- ENTER QUERY
5...:
```

at the system automatically returns to the search mode the cost display has been executed. When the cost command red, the TIME is automatically reset to zero; therefore, if ME statistics are also required, the user should first use time' command and then the '..cost' command. It should e noted that the user can specify that the cost statistics elayed automatically by invoking a special command found in each time the user logs off the system.

'time' (...t) permits the user to ask for the connect time point during the online session. The system will respond with connect time in hours, minutes, and seconds and in hours. An example of the 'time' feature is shown below.

```
6...: ..time
CONNECT TIME 0:05:45 HH:MM:SS 0.097 DEC HRS SESSION 225*
```

```
6...:
```

at the system then places the user back into the search automatically. When the '..cost' command is used, the time is set to zero. Therefore when the user wants to know the time and cost of a session so far, the '..time' command should be first and the '..cost' command next (see the COSTS lesson).

HLIGHT

re implemented in 1985 with BRS is the command "...set highlight=on". This feature will cause the keyword(s) searched for to be 'highlighted' in text or titles of the document where the word is found. The word or words are set off from the rest of the text by placing an asterisk (*) on either side of the searched term(s).

If a user were searching for the word, 'cold' and had previously set the highlight feature on, then a sentence in the document where the word was found would appear as follows.

There are several ways to protect newborn pigs from the ~~acold~~ which ..."

The highlight feature will remain in effect until a "...set highlight=off" command is implemented or the user signs off the system.

the system usage using the abbreviated term.

out the time that you have been on the system using the abbreviations to the BRS accounting system by using the correct command with the range/ command.

are in ACCT; go to profile and change your telephone number to 3175559999

the proper command to change to the BRS accounting system, whose name is I'.

ge to the management database whose name is, "MGMT".

ch for "gold" and stack a limit command, "...limit/l yr gt 79", in the statement.

ge the symbol for stacking commands from the "/" to "#".

have been in BRS searching for awhile; find out your costs for this ion.

DIRECT DIAL LESSON ****

play all of the search results for the session so far.

play the results for statements 1,3 and 5 only.

ERROR CORRECTION ****

ute a temporarily saved search strategy with the label, "SUM".

ute a permanently saved query with the label, "FARM".

have printed the occurrences of a search; use the '*' command to print text for the fifth paragraph of the third document.

it out all titles and text for the term just searched using "...print" *, and "hits" for document 2.

t your search to only those titles which appear in documents for years h are greater than 1981.

t your search to only those titles which are written in english; 'en'.

the correct operator to search for all documents which contain either ' or 'FRIEND', but not both.

ch for the terms 'SWINE' and 'DISEASES' that both appear in the same ence.

ch for the terms 'SWINE', 'DISEASES' and 'TREATMENTS' which all appear in same paragraph.

ch for 'HOLDING PONDS' or 'LAGOONS'.

off the BRS system completely.

off the system with the option of continuing the same search process r in the same day.

ch for the term 'pseudorabies'.

ch for all the documents in which 'farrowing' appears in the title.

t the titles for all the documents found in search statement 1.

t out the entire text for statement 1, document 2.

all the text for all documents found in search statement 3 printed ine, with 'John Smith' as the identifying information (ID).

an ID of 'John Doe,R 2,Farmville'; have all the titles associated with ch statement 5 and document 3 printed offline.

all the documents in the system.

the root for 'port'.

the root for 'root'.

he detail on and search for 'swine' or 'hogs'.

etail off.

DI to save a search profile for statement 2 using an ID of 'Smith,L'.

DI to save all of the strategy for statement 3, but command it to
e in June,1987; the id is jones,j.
and list an SDI with a number 'q0003'.

OPWORDS ****

LENET ****

LENET IN-WATS ****

RMINAL IDENTIFIERS ****

your connect time so far for this session.

h for every word which begins with 'MAN'.

h for every word which begins with 'MAN', but limit the total term
h to seven letters or less.

LENET ****

INET ****

out what the system usage is for today.

es a temporary search using the label, 'HOME'.

es a permanent search using the label, 'HEAT'.

h for the term, 'HOUSING', but qualify the search so that only those
ents which contain the term in the title are returned.

, the 'occurrences' and 'section headings' for search statement 2
ll the documents.

QUICK BROWSE *****

E
E/ACCT

I

I
E/MGMT

999
LIMIT/6 PD GT 79
LIMIT/6 PD > 79
L/6 PD GT 79
L/6 PD > 79
TACK=#
TACK = *

AY ALL

AY 1-3

AY 1,2,3
,3
AY 1,3,5
,5
SUM

PS(FARM)
FARM)

SSH
SSH
SSH
ITS
SSH

/2 PD GT 81
/2 PD > 81
D > 81
D GT 81
/1 LG = EN
/1 LG EQ EN
G = EN
G EQ EN
FRIEND
XOR MAN
TH DISEASES
ES WITH BOAR
NAME DISEASES TREATMENT
NAME TREATMENT DISEASES
NAME DISEASES SAME TREATMENT
NAME TREATMENT SAME DISEASES

S SAME TREATMENT SAME SWINE
NT SAME SWINE DISEASES
NT SAME DISEASES SWINE
NT SAME DISEASES SAME SWINE
NT SAME SWINE SAME DISEASES
ADJ PONDS OR LAGOONS
OR HOLDING ADJ PONDS

ONT
T
ABIES
6/1-8
6/ALL
I/ALL
I/1-8
I/DOC=ALL
1 TI/ALL
1 TI/1-8
I/DOC=1-8
1 FG/ALL
1 FG/1-8
6/DOC=ALL
6/DOC=1-8
1 FG/DOC=1-8
1 FG/DOC=ALL
1 TI/DOC=1-8
1 TI/DOC=ALL
FG/1,2,3,4,5,6,7,8
TI/1,2,3,4,5,6,7,8
1 FG/1,2,3,4,5,6,7,8
1 TI/1,2,3,4,5,6,7,8
FG/DOC=1,2,3,4,5,6,7,8
TI/DOC=1,2,3,4,5,6,7,8
1 TI/DOC=1,2,3,4,5,6,7,8
1 FG/DOC=1,2,3,4,5,6,7,8
1 TX/DOC=2
TX/DOC=2
1 TX/2
TX/2
TOFF 3 TX/DOC=ALL/ID=SMITH, JOHN
TOFF 3 TX/DOC=1-2/ID=SMITH, JOHN
TOFF 3 TX/DOC=1,2/ID=SMITH, JOHN
TX/DOC=ALL/ID=SMITH, JOHN
TX/DOC=1,2/ID=SMITH, JOHN
TX/DOC=1-2/ID=SMITH, JOHN
RE ALL
LL
-3
,2,3
RE 1-3
RE 1,2,3
RE PS(ABC)
S(ABC) .
ORK
ROOT
DETAIL=ON
DETAIL = ON
OR HOGS
OR SWINE
HOGS
SWINE
DETAIL=OFF

HOME
OME
PS(HEAL)
S(HEAL)

G.TI.

DC,SH/ALL

DC,SH/1-3

SH,DC/ALL

SH,DC/1-3

SH,OC/1,2,3

DC,SH/1,2,3

II 2 OC,SH/ALL

II 2 OC,SH/1-3

DC,SH/DOC=ALL

DC,SH/DOC=1-3

II 2 SH,OC/ALL

SH,OC/DOC=ALL

II 2 SH,OC/1-3

SH,OC/DOC=1-3

II 2 OC,SH/1,2,3

DC,SH/DOC=1,2,3

II 2 SH,OC/1,2,3

SH,OC/DOC=1,2,3

II 2 OC,SL/DOC=ALL

II 2 OC,SH/DOC=1-3

II 2 SH,OC/DOC=ALL

II 2 SH,OC/DOC=1-3

II 2 SH,OC/DOC=1,2,3

II 2 OC,SH/DOC=1,2,3

ING

TOFF 5 TI/DOC=3/ID=DOE,JOHN,R2,FARMVILLE

TI/DOC=3/ID=DOE,JOHN,R2,FARMVILLE

EG/DOC=3/ID=DOE,JOHN,R2,FARMVILLE

TOFF 5 EG/DOC=3/ID=DOE,JOHN,R2,FARMVILLE

HIGHLIGHT=ON

HIGHLIGHT = ON

HIGHLIGHT=OFF

HIGHLIGHT = OFF

Sample Questionnaire
Laser Disc Users
Appendix B

- 1) Which of the following categories best describes your primary occupation? (more than one may be used)
- a) University staff
 - b) Extension/County agent
 - c) Farmer/producer
 - d) Private organization
 - e) Library staff
 - f) Agribusiness
 - g) Student
 - h) Public information specialist
 - i) USDA administrator
 - j) Other
- 2) How would you rate your micro computer skills?
- a) Expert
 - b) Above average
 - c) Average
 - d) Below average
 - e) Non-existent
- 3) Which types of computer equipment do you currently OWN?
- a) micro computer (i.e. personal computer)
 - b) mini computer
 - c) main-frame computer
 - d) computer terminal (i.e. 'dumb' terminal)
 - e) modem
 - f) disk drive
 - g) printer
 - h) none
- 4) Which types of computer equipment do you currently use regularly?
- a) micro computer (i.e. personal computer)
 - b) mini computer
 - c) main-frame computer
 - d) computer terminal (i.e. 'dumb' terminal)
 - e) modem
 - f) disk drive
 - g) printer
 - h) none

- 5) Concerning available dial-up services, which ones have you used at least once?
- a) Commercial databases
(e.g. BRS, Dialog, etc.)
 - b) Bulletin board or electronic mail
 - c) Commercial (e.g. Agridata network, Grassroots, The Source etc.)
 - d) On-line programs
(e.g. Agnet, Teleplan etc.)
 - e) None
- 6) Concerning available dial-up services, which ones do you use REGULARLY?
- a) Commercial databases
(e.g. BRS, Dialog, etc.)
 - b) Bulletin board or electronic mail
 - c) Commercial (e.g. Agridata network, Grassroots, The Source etc.)
 - d) On-line programs
(e.g. Agnet, Teleplan etc.)
 - e) None
- 7) Which of the following best describes your age group?
- a) 25 years and under
 - b) 26-50 years
 - c) 51+ years
- 8) Concerning the PORK INDUSTRY HANDBOOK (PIH printed text), check the one statement that is most true.
- a) I have not seen it prior to this experience.
 - b) I am familiar with it.
 - c) I am a subscriber.
 - d) I am an author/contributer.
- 9) How would you best describe your use of the PIH printed text information?
- a) I use it frequently.
 - b) I use it when I have a problem.
 - c) I seldom use it.

- 10) Of these systems of information delivery, which would you say is more convenient to use?
 a) PORK INDUSTRY HANDBOOK printed text
 b) PORK INDUSTRY HANDBOOK video laser disc version
- 11) Which system would you say allows you to find information more rapidly?
 a) PORK INDUSTRY HANDBOOK printed text
 b) PORK INDUSTRY HANDBOOK video laser disc version
- 12) If cost were not a factor, which system would you prefer to use?
 a) PORK INDUSTRY HANDBOOK printed text
 b) PORK INDUSTRY HANDBOOK video laser disc version
- 13) Which form of information presentation do you find easiest to read?
 a) PORK INDUSTRY HANDBOOK printed text
 b) PORK INDUSTRY HANDBOOK video laser disc version
- 14) If you had access to both systems, which one do you believe you would use the most?
 a) PORK INDUSTRY HANDBOOK printed text
 b) PORK INDUSTRY HANDBOOK video laser disc version

15) Enter the number of the state or country in which you live.

01-Alabama	14-Indiana	27-Nebraska	40-S. Carolina
02-Alaska	15-Iowa	28-Nevada	41-S. Dakota
03-Arizona	16-Kansas	29-New Hampshire	42-Tennessee
04-Arkansas	17-Kentucky	30-New Jersey	43-Texas
05-California	18-Louisiana	31-New Mexico	44-Utah
06-Colorado	19-Maine	32-New York	45-Vermont
07-Connecticut	20-Maryland	33-N. Carolina	46-Virginia
08-Delaware	21-Massachusetts	34-N. Dakota	47-Washington
09-Florida	22-Michigan	35-Ohio	48-W. Virginia
10-Georgia	23-Minnesota	36-Oklahoma	49-Wisconsin
11-Hawaii	24-Mississippi	37-Oregon	50-Wyoming
12-Idaho	25-Missouri	38-Pennsylvania	51-D. of Columbia
13-Illinois	26-Montana	39-Rhode Island	52-Other countries

16) To subscribe to the PIH PRINTED TEXT initially costs \$25 plus \$15 per year for updates. With this in mind, how much would you be willing to pay for the laser disc version of the PORK INDUSTRY HANDBOOK?

\$ a) Initial fee

\$ b) Yearly fee

Sample Questionnaire
BRS On-Line Users
Appendix C

1) Which of the following categories best describes your primary occupation? (more than one may be used)

- a) University staff
- b) Extension/County agent
- c) Farmer/producer
- d) Private organization
- e) Library staff
- f) Agribusiness
- g) Student
- h) Public information specialist
- i) USDA administrator
- j) Other

2) How would you rate your micro computer skills?

- a) Expert
- b) Above average
- c) Average
- d) Below average
- e) Non-existent

3) Which types of computer equipment do you currently own?

- a) micro computer (i.e. personal computer)
- b) mini computer
- c) main-frame computer
- d) computer terminal (i.e. 'dumb' terminal)
- e) modem
- f) disk drive
- g) printer
- h) none

4) Which types of computer equipment do you currently use regularly?

- a) micro computer (i.e. personal computer)
- b) mini computer
- c) main-frame computer
- d) computer terminal (i.e. 'dumb' terminal)
- e) modem
- f) disk drive
- g) printer
- h) none

5) Concerning available dial-up services, which ones have you used at least once?

- a) Commercial databases
(e.g. BRS, Dialog, etc.)
- b) Bulletin board or electronic mail
- c) Commercial (e.g. AgriData network,
Grassroots, The Source etc.)
- d) On-line programs
(e.g. Agnet, Teleplan etc.)
- e) None

- 6) Concerning available dial-up services, which ones do you use REGULARLY?
- a) Commercial databases
(e.g. BRS, Dialog, etc.)
 - b) Bulletin board or electronic mail
 - c) Commercial (e.g. AgriData network,
Grassroots, The Source etc.)
 - d) On-line programs
(e.g. Agnet, Teleplan etc.)
 - e) None
- 7) Which of the following best describes your age group?
- a) 25 years and under
 - b) 26-50 years
 - c) 51+ years
- 8) Concerning the PORK INDUSTRY HANDBOOK (PIH printed text), check the one statement that is most true.
- a) I have not seen it prior to this experience.
 - b) I am familiar with it.
 - c) I am a subscriber.
 - d) I am an author/contributer.
- 9) How would you best describe your use of the PIH printed text information?
- a) I use it frequently.
 - b) I use it when I have a problem.
 - c) I seldom use it.
- 10) Of these systems of information delivery, which would you say is more convenient to use?
- a) PORK INDUSTRY HANDBOOK printed text
 - b) PORK INDUSTRY HANDBOOK BRS online version
- 11) Which system would you say allows you to find information more rapidly?
- a) PORK INDUSTRY HANDBOOK printed text
 - b) PORK INDUSTRY HANDBOOK BRS online version
- 12) If cost were not a factor, which system would you prefer to use?
- a) PORK INDUSTRY HANDBOOK printed text
 - b) PORK INDUSTRY HANDBOOK BRS online version
- 13) Which form of information presentation do you find easiest to read?
- a) PORK INDUSTRY HANDBOOK printed text
 - b) PORK INDUSTRY HANDBOOK BRS online version
- 14) If you had access to both systems, which one do you believe you would use the most?
- a) PORK INDUSTRY HANDBOOK printed text
 - b) PORK INDUSTRY HANDBOOK BRS online version

15) Enter the number of the state or country in which you live.

01-Alabama	14-Indiana	27-Nebraska	40-S. Carolina
02-Alaska	15-Iowa	28-Nevada	41-S. Dakota
03-Arizona	16-Kansas	29-New Hampshire	42-Tennessee
04-Arkansas	17-Kentucky	30-New Jersey	43-Texas
05-California	18-Louisiana	31-New Mexico	44-Utah
06-Colorado	19-Maine	32-New York	45-Vermont
07-Connecticut	20-Maryland	33-N. Carolina	46-Virginia
08-Delaware	21-Massachusetts	34-N. Dakota	47-Washington
09-Florida	22-Michigan	35-Ohio	48-W. Virginia
10-Georgia	23-Minnesota	36-Oklahoma	49-Wisconsin
11-Hawaii	24-Mississippi	37-Oregon	50-Wyoming
12-Idaho	25-Missouri	38-Pennsylvania	51-D. of Columbia
13-Illinois	26-Montana	39-Rhode Island	52-Other countries

16) To subscribe to the PIH PRINTED TEXT initially costs \$25 plus \$15 per year for updates. With this in mind, how much would you be willing to pay for the BRS online version of the PORK INDUSTRY HANDBOOK?

\$ a) Initial fee

\$ b) Yearly fee

Source Code
Electronic Versions
of Questionnaires
Appendix D


```

#include <curses.h>
#include <stdio.h>

char *save[] = {
    "00-NNNNNNNNNNNNNNN0",
    "01-NNNNNNNNNNNNNNN0",
    "02-NNNNNNNNNNNNNNN0",
    "03-NNNNNNNNNNNNNNN0",
    "04-NNNNNNNNNNNNNNN0",
    "05-NNNNNNNNNNNNNNN0",
    "06-NNNNNNNNNNNNNNN0",
    "07-NNNNNNNNNNNNNNN0",
    "08-NNNNNNNNNNNNNNN0",
    "09-NNNNNNNNNNNNNNN0",
    "10-NNNNNNNNNNNNNNN0",
    "11-NNNNNNNNNNNNNNN0",
    "12-NNNNNNNNNNNNNNN0",
    "13-NNNNNNNNNNNNNNN0",
    "14-NNNNNNNNNNNNNNN0",
    "15-NNNNNNNNNNNNNNN0",
    "16-NNNNNNNNNNNNNNN0",
    "17-NNNNNNNNNNNNNNN0",
    "18-brs-brs-brs--0",
    };

```

```

main()
{
    int cmd, temp;
    cmd=0;
    n='b';

    while (cmd <= 5) {
        if (cmd==5) {
            n='s';
        } else if (cmd==3) {
            temp=n;
            n='a';
        } else if (cmd==4) {
            n=temp;
        } else if (cmd==1) {
            n++;
        } else if (cmd==2) {
            n--;
        }

        switch (n) {
        case 'a':
            cmd=help();
            break;
        case 'b':
            cmd=intro();
            break;
        case 'c':
            cmd=page2();
            break;
        case 'd':

```



```
cmmd=page3();
break;
case 'e':
cmmd=page4();
break;
case 'f':
cmmd=page5();
break;
case 'g':
cmmd=page6();
break;
case 'h':
cmmd=page7();
break;
case 'i':
cmmd=page8();
break;
case 'j':
cmmd=page9();
break;
case 'k':
cmmd=page10();
break;
case 'l':
cmmd=page11();
break;
case 'm':
cmmd=page12();
break;
case 'n':
cmmd=page13();
break;
case 'o':
cmmd=page14();
break;
case 'p':
cmmd=page15();
break;
case 'q':
cmmd=page16();
break;
case 'r':
cmmd=page17();
break;
case 's':
brssave();
endwin();
exit(0);
break;
default:
break;
}
}
}
```



```
#####
intro function
#####
int intro()
{
    char c;
    initscr();
    crmode();
    noecho();
mvaddstr(2,0,"This is a brief evaluation regarding your views about the BRS on-line vers
mvaddstr(3,0,"the PORK INDUSTRY HANDBOOK (PIH) verses the original printed version of th
mvaddstr(5,0,"This evaluation was made to mimic a printed page and most entries will be"
mvaddstr(6,0,"either the 'x' key to say yes to a statement or the spacebar to say no.");
mvaddstr(8,0,"Each entry will cause the curser to drop down to the next statement.");
mvaddstr(10,0,"Using the 'n' key will move you on to the next page while assigning a 'no
mvaddstr(11,0,"all unanswered questions. A brief menu remains at the bottom of each page.
mvaddstr(12,0,"with a more complete HELP screen always available by using the 'h' key."
mvaddstr(14,0,"Thank you very much for aiding this evaluation project with a few moment
mvaddstr(15,0,"of your time to tell us what you think.");
mvaddstr(19,0," -----> HIT 'n' TO BEGIN THE EVALUATION <-----"
mvaddstr(22,0,"_
mvaddstr(23,0,"HELP..h                                BEGIN EVALUATION..n          EX
refresh();
move(19,0);
refresh();
again:
c=getch();
refresh();
if (c == 'H' || c == 'h'){
    clear();
    refresh();
    endwin();
    return(3);
}
else if (c == 'n' || c == 'N'){
    clear();
    refresh();
    endwin();
    return(1);
}
else if(c == 'E' || c == 'e'){
    clear();
    refresh();
}
```



```
endwin();
return(5);
else{
    goto again;
}

/*#####
 help page function
#####
*/
```

int help()
{
 char c;
 initscr();
 crmode();
 noecho();
mvaddstr(0,0," *** HELP MENU ***");

mvaddstr(1,0,"Following are all of the commands and their functions. An abbreviated list
mvaddstr(2,0,"of these commands also remains at the bottom of each screen.");
mvaddstr(4,0,"REVISE....(r) This will return you to the first statement of the question.
mvaddstr(5,0," you are currently working on. All previous input is deleted.
mvaddstr(7,0,"NEXT.....(n) This will move you to the next question. It will assign a ':
mvaddstr(8,0," answer to all statements which are skipped.");
mvaddstr(10,0,"PREVIOUS..(p) This will return to the previous question. The previous in
mvaddstr(11,0," is deleted.");
mvaddstr(13,0,"YES.....(x) This assigns a yes answer to the statement, places an 'x'
mvaddstr(14,0," to the statement and moves the curser down to the next sta
mvaddstr(16,0,"NO..(spacebar) This assigns a no answer to the statement, places nothing
mvaddstr(17,0," to the statement and moves the curser down to the next sta
mvaddstr(19,0,"EXIT.....(e) This exits the evaluation (first screen or after the final
mvaddstr(20,0," only). Your answers are stored only after the final questi
mvaddstr(23,0,"-----> HIT 'h' TO RETURN TO THE EVALUATION <-----");
refresh();
move(23,0);
refresh();
again:
c=getch();
refresh();


```
if (c == 'H' || c == 'h'){
    clear();
    refresh();
    endwin();
    return(4);}
else{
    goto again;}
}

/*#####
page2 function
#####
*/

int page2()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(0,0,"1) Which of the following categories best describes your");
    mvaddstr(1,0," primary occupation? (more than one may be used)");
    mvaddstr(3,0," a) University staff");
    mvaddstr(5,0," b) Extension/County agent");
    mvaddstr(7,0," c) Farmer/producer");
    mvaddstr(9,0," d) Private organization");
    mvaddstr(11,0," e) Library staff");
    mvaddstr(13,0," f) Agribusiness");
    mvaddstr(15,0," g) Student");
    mvaddstr(17,0," h) Public information specialist");
    mvaddstr(19,0," i) USDA administrator");
    mvaddstr(21,0," j) Other");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne");
    refresh();
    cmmnd=movement(1,3,22,2,0);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}

/*#####
page3 function
#####
*/

int page3()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"2) How would you rate your micro computer skills");
    mvaddstr(3,0," a) Expert");
    mvaddstr(5,0," b) Above average");
```



```
mvaddstr(7,0,"    c) Average");
mvaddstr(9,0,"    d) Below average");
mvaddstr(11,0,"    e) Non-existent");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(1,3,11,2,2);
clear();
refresh();
endwin();
return(cmmnd);
}
```

```
/*#####
page4 function
#####*/
```

```
int page4()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"3) Which types of computer equipment do you currently own?");
mvaddstr(4,0,"    a) micro computer (i.e. personal computer)");
mvaddstr(6,0,"    b) mini computer");
mvaddstr(8,0,"    c) main-frame computer");
mvaddstr(10,0,"    d) computer terminal (i.e. 'dumb' terminal)");
mvaddstr(12,0,"    e) modem");
mvaddstr(14,0,"    f) disk drive");
mvaddstr(16,0,"    g) printer");
mvaddstr(18,0,"    h) none");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(2,4,18,2,3);
clear();
refresh();
endwin();
return(cmmnd);
}
```

```
/*#####
page5 function
#####*/
```

```
int page5()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"4) Which types of computer equipment do you currently use");
mvaddstr(2,0,"    regularly");
mvaddstr(5,0,"    a) micro computer (i.e. personal computer)");
```



```
mvaddstr(7,0,"      b) mini computer");
mvaddstr(9,0,"      c) main-frame computer");
mvaddstr(11,0,"      d) computer terminal (i.e. 'dumb' terminal)");
mvaddstr(13,0,"      e) modem");
mvaddstr(15,0,"      f) disk drive");
mvaddstr(17,0,"      g) printer");
mvaddstr(19,0,"      h) none");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    n")
refresh();
cmmd=movement(2,5,19,2,4);
clear();
refresh();
endwin();
return(cmmd);
}

/*#####
page6 function
#####
*/
```

```
int page6()
{
    int cmmd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"5) Concerning available dial-up services, which ones have");
mvaddstr(2,0,"      you used at least once?");
mvaddstr(4,0,"      a) Commercial databases");
mvaddstr(5,0,"          (e.g. BRS, Dialog, etc:)");
mvaddstr(7,0,"      b) Bulletin board or electronic mail");
mvaddstr(10,0,"      c) Commercial (e.g. Agriadata network,");
mvaddstr(11,0,"          Grassroots, The Source etc.)");
mvaddstr(13,0,"      d) On-line programs ");
mvaddstr(14,0,"          (e.g. Agnet, Teleplan etc.)");
mvaddstr(16,0,"      e) None");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    n")
refresh();
cmmd=movement(2,4,16,3,5);
clear();
refresh();
endwin();
return(cmmd);
}

/*#####
page7 function
#####
```



```
#####
int page7()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"6) Concerning available dial-up services, which ones do you use REGULARLY
    mvaddstr(3,0,"    a) Commercial databases");
    mvaddstr(4,0,"        (e.g. BRS, Dialog, etc.)");
    mvaddstr(6,0,"    b) Bulletin board or electronic mail");
    mvaddstr(9,0,"    c) Commercial (e.g. Agridata network,");
    mvaddstr(10,0,"        Grassroots, The Source etc.");
    mvaddstr(12,0,"    d) On-line programs ");
    mvaddstr(13,0,"        (e.g. Agnet, Teleplan etc.)");
    mvaddstr(15,0,"    e) None");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne");
    refresh();
    cmmnd=movement(2,3,15,3,6);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}

#####
page8 function
#####
int page8()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"7) Which of the following best describes your age group?");
    mvaddstr(3,0,"    a) 25 years and under");
    mvaddstr(5,0,"    b) 26-50 years");
    mvaddstr(7,0,"    c) 51+ years");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne");
    refresh();
    cmmnd=movement(1,3,7,2,7);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}
```



```
#####
page9 function
#####
int page9()
{
    int cmmnd;
    initscr();
    cremode();
    noecho();
mvaddstr(1,0,"8) Concerning the PORK INDUSTRY HANDBOOK (PIH printed text), check the or
mvaddstr(2,0," statement that is most true.");
mvaddstr(4,0," a) I have not seen it prior to this experience.*");
mvaddstr(6,0," b) I am familiar with it.");
mvaddstr(8,0," c) I am a subscriber.");
mvaddstr(10,0," d) I am an author/contributer.");
mvaddstr(14,10," *(if you chose
mvaddstr(22,0,"
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p
refresh();
cmmnd=movement(1,4,10,2,8);
clear();
refresh();
endwin();
return(cmmnd);
}

#####
page10 function
#####
int page10()
{
    int cmmnd;
    initscr();
    cremode();
    noecho();
mvaddstr(1,0,"9) How would you best describe your use of the PIH printed text informa-
mvaddstr(3,0," a) I use it frequently.");
mvaddstr(5,0," b) I use it when I have a problem.");
mvaddstr(7,0," c) I seldom use it.");
mvaddstr(19,0," ** THIS PAGE CAN BE SKIPPED BY IMMEDIATELY USING THE 'n' KEY **"
mvaddstr(22,0,"
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p
refresh();
cmmnd=movement(1,3,7,2,9);
clear();
refresh();
endwin();
return(cmmnd);
}
```



```
/*#####
 * pagell function
#####
int pagell()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"10) Of these systems of information delivery, which would you say");
    mvaddstr(2,0,"    is more convenient to use?");
    mvaddstr(4,0,"    a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(6,0,"    b) PORK INDUSTRY HANDBOOK BRS online version");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne");
    refresh();
    cmmnd=movement(1,4,6,2,10);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}

/*#####
 * pagel2 function
#####
int pagel2()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"11) Which system would you say allows you to find information more");
    mvaddstr(2,0,"    rapidly");
    mvaddstr(4,0,"    a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(6,0,"    b) PORK INDUSTRY HANDBOOK BRS online version");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne");
    refresh();
    cmmnd=movement(1,4,6,2,11);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}

/*#####
 * pagel3 function
#####
int pagel3()
{
```



```
int cmmnd;
initscr();
cremode();
noecho();
mvaddstr(1,0,"12) If cost were not a factor, which system would you prefer to use?" );
mvaddstr(3,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
mvaddstr(5,0,"____ b) PORK INDUSTRY HANDBOOK BRS online version");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne>
refresh();
cmmnd=movement(1,3,5,2,12);
clear();
refresh();
endwin();
return(cmmnd);
}

/*#####
page14 function
#####
*/

int page14()
{
    int cmmnd;
    initscr();
    cremode();
    noecho();
    mvaddstr(1,0,"13) Which form of information presentation do you find easiest to read?" );
    mvaddstr(3,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(5,0,"____ b) PORK INDUSTRY HANDBOOK BRS online version");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne>
refresh();
cmmnd=movement(1,3,5,2,13);
clear();
refresh();
endwin();
return(cmmnd);
}

/*#####
page15 function
#####
*/

int page15()
{
    int cmmnd;
    initscr();
    cremode();
    noecho();
    mvaddstr(1,0,"14) If you had access to both systems, which one do you believe");
    mvaddstr(2,0,"____ you would use the most");
    mvaddstr(4,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(6,0,"____ b) PORK INDUSTRY HANDBOOK BRS online version");
```



```
mvaddstr(22,0,"  
mvaddstr(23,0,"help..h      revise..r      yes..x      no..<spacebar>      previous..p  
refresh();  
cmmd=movement(1,4,6,2,14);  
clear();  
refresh();  
endwin();  
return(cmmd);  
}  
  
/*#####
  pagel6 function
#####*/  
  
int pagel6()  
{  
    int cmmd,i,j;  
    char c;  
    char state[10];  
    initscr();  
    cremode();  
    noecho();  
    mvaddstr(1,0,"15) Enter the number of the state or country in which you live.");  
    mvaddstr(3,0," ");  
    mvaddstr(5,0,"01-Alabama      14-Indiana      27-Nebraska      40-S. Carolina"  
    mvaddstr(6,0,"02-Alaska      15-Iowa      28-Nevada      41-S. Dakota");  
    mvaddstr(7,0,"03-Arizona      16-Kansas      29-New Hampshire      42-Tennessee");  
    mvaddstr(8,0,"04-Arkansas      17-Kentucky      30-New Jersey      43-Texas");  
    mvaddstr(9,0,"05-California      18-Louisiana      31-New Mexico      44-Utah");  
    mvaddstr(10,0,"06-Colorado      19-Maine      32-New York      45-Vermont");  
    mvaddstr(11,0,"07-Connecticut      20-Maryland      33-N. Carolina      46-Virginia");  
    mvaddstr(12,0,"08-Delaware      21-Massachusetts      34-N. Dakota      47-Washington");  
    mvaddstr(13,0,"09-Florida      22-Michigan      35-Ohio      48-W. Virginia");  
    mvaddstr(14,0,"10-Georgia      23-Minnesota      36-Oklahoma      49-Wisconsin");  
    mvaddstr(15,0,"11-Hawaii      24-Mississippi      37-Oregon      50-Wyoming");  
    mvaddstr(16,0,"12-Idaho      25-Missouri      38-Pennsylvania      51-D. of Colum  
    mvaddstr(17,0,"13-Illinois      26-Montana      39-Rhode Island      52-Other coun  
    mvaddstr(22,0,"-----  
    mvaddstr(23,0,"help..h      revise..r      next..n      previ  
        refresh();  
        move(3,0);
```



```
refresh();
j=0;
while (j <= 1){
    c=getch();
    state[j]=c;
    addch(c);
    refresh();
    j++;}
state[j]=' ';
move(22,0);
refresh();
again:
c=getch();
refresh();
if (c == 'r' || c == 'R'){
    clear();
    refresh();
    endwin();
    return(0);}
else if (c == 'h' || c == 'H'){
    clear();
    refresh();
    endwin();
    return(3);}
else if (c == 'n' || c == 'N'){
    i=0;
    j=3;
    while ((save[15][j]=state[i]) != ' '){
        j++;
        i++;}
    clear();
    refresh();
    endwin();
    return(1);}
else if (c == 'p' || c == 'P'){
    clear();
    refresh();
    endwin();
    return(2);}
else{
    mvaddstr(22,0,"SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED
    move(22,0);
    refresh();
    goto again;}
}

/*#####
page17 function#####
#####*/
```

```
int page17()
{
    int j,i;
```



```
char c;
char initfee[10],yearfee[10];
initscr();
crmode();
noecho();
mvaddstr(1,0,"16) To subscribe to the PIH PRINTED TEXT initially costs $25 plus $15 per
mvaddstr(2,0," for updates. With this in mind, how much would you be willing to pay ?
mvaddstr(3,0," the BRS online version of the PORK INDUSTRY HANDBOOK?" );
mvaddstr(6,0,"$__ a) Initial fee");
mvaddstr(8,0,"$__ b) Yearly fee");
mvaddstr(18,0," THIS IS THE FINAL QUESTION. THANK YOU FOR YOUR EVALUATION.");
mvaddstr(19,0," -----> USE THE 'e' KEY TO EXIT <-----");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h"   revise...r   previous...p   EXIT EVALUATION

refresh();
move(6,1);
refresh();
i=0;
while (i <= 1){
    c=getch();
    initfee[i]=c;
    addch(c);
    refresh();
    i++;}
initfee[i]=' ';
move(8,1);
refresh();
i=0;
while (i <= 1){
    c=getch();
    yearfee[i]=c;
    addch(c);
    refresh();
    i++;}
yearfee[i]=' ';
move(19,6);
refresh();
again:
c=getch();
if (c == 'r' || c == 'R'){
    clear();
    refresh();
    endwin();
    return(0);}
else if (c == 'e' || c == 'E'){
    j=3;
```



```
i=0;
while ((save[16][j] = initfee[i]) != ' ') {
j++;
i++;
j=3;
i=0;
while ((save[17][j] = yearfee[i]) != ' ') {
j++;
i++;
}
clear();
refresh();
endwin();
return(5);
}
else if (c == 'p' || c == 'P'){
clear();
refresh();
endwin();
return(2);
}
else if (c == 'h' || c == 'H'){
clear();
refresh();
endwin();
return(3);
}
else{
mvaddstr(22,0,"SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED
move(19,6);
refresh();
goto again;
}
```

```
/*#####
movement function
This function moves the curser for most page functions and returns a command
which tells the main program whether to go to next page or return to the
previous page.
#####*/
```

```
int movement(startx,starty,max,incr,row)
int startx,starty,max,incr,row;
int i,n,z;
char y,x,c,q,p;
y=' ';
x='x';
q='n';
p='p';
for(i=3;i<=16;i++){
save[row][i]='N';
move(starty,startx);
refresh();
n=starty;
while (n <= (max+incr)){
if (n == starty){
z=3;
}
```



```
else{
    z=z+2;
    if (row == 0 && z == 13){
        row=1;
        for(i=3;i<=16;i++){
            save[row][i]='N';
        z=3;
    }
    else if (row == 0 && z <=13){
        for(i=3;i<=16;i++){
            save[1][i]='N';
        }
    again:
    c=getch();
    if (c == 'r' || c == 'R'){
        n=(max+incr)+1;
        return(0);
    }
    else if (c == 'h' || c == 'H'){
        return(3);
    }
    else if (c == ' '){
        if(n<=max){
            save[row][z]='N';
            save[row][z+1]='|';
            addch(y);
            n=n+incr;
        mvaddstr(22,0,"_____
            move(n,startx);
            refresh();
        else{
            return(1);
        }
    }
    else if (c == 'x' || c == 'X'){
        if(n<=max){
            save[row][z]='Y';
            save[row][z+1]='|';
            addch(x);
        mvaddstr(22,0,"_____
            n=n+incr;
            move(n,startx);
            refresh();
        else{
            return(1);
        }
    }
    else if (c == 'n' || c == 'N'){
        n=(max+incr)+1;
        return(1);
    }
    else if (c == 'p' || c == 'P'){
        n=(max+incr)+1;
        if(row==0 || row==1){
            return(0);
        }
        else{
            return(2);
        }
    }
    else{
        mvaddstr(22,0,"    SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED
            move(n,startx);
            refresh();
            goto again;
    }
}
```


1

```
/*#####
 *brssave function
 *This function saves the array (save[][][]) in the file "lasans" by appending
 *it. This function is only called immediately before the main program is exited.
 #####*/
```

brssave()

{

FILE *fp;

```
int i,j;  
fp=fopen("brsans","a");  
for(i=0;i<=18;i++){  
printf(fp,"%s0.save[i])
```

fclose(fp);

16 close (Ip),
return;

3


```

#include <curses.h>
#include <stdio.h>

char *save[]={

    "00-NNNNNNNNNNNNNNNN0,
    "01-NNNNNNNNNNNNNNNN0,
    "02-NNNNNNNNNNNNNNNN0,
    "03-NNNNNNNNNNNNNNNN0,
    "04-NNNNNNNNNNNNNNNN0,
    "05-NNNNNNNNNNNNNNNN0,
    "06-NNNNNNNNNNNNNNNN0,
    "07-NNNNNNNNNNNNNNNN0,
    "08-NNNNNNNNNNNNNNNN0,
    "09-NNNNNNNNNNNNNNNN0,
    "10-NNNNNNNNNNNNNNNN0,
    "11-NNNNNNNNNNNNNNNN0,
    "12-NNNNNNNNNNNNNNNN0,
    "13-NNNNNNNNNNNNNNNN0,
    "14-NNNNNNNNNNNNNNNN0,
    "15-NNNNNNNNNNNNNNNN0,
    "16-NNNNNNNNNNNNNNNN0,
    "17-NNNNNNNNNNNNNNNN0,
    "18--laser--laser--0,
};

main()
{
    int n,cmd,temp;
    cmd=0;
    n='b';

    while (cmd <= 5){
        if (cmd==5){
            n='s';
        }
        else if (cmd==3){
            temp=n;
            n='a';
        }
        else if (cmd==4){
            n=temp;
        }
        else if (cmd==1){
            n++;
        }
        else if (cmd==2){
            n--;
        }

        switch (n) {
        case 'a':
            cmd=help();
            break;
        case 'b':
            cmd=intro();
            break;
        case 'c':
            cmd=page2();
            break;
        case 'd':
            break;
        }
    }
}

```



```
cmmd=page3();
break;
case 'e':
cmmd=page4();
break;
case 'f':
cmmd=page5();
break;
case 'g':
cmmd=page6();
break;
case 'h':
cmmd=page7();
break;
case 'i':
cmmd=page8();
break;
case 'j':
cmmd=page9();
break;
case 'k':
cmmd=page10();
break;
case 'l':
cmmd=page11();
break;
case 'm':
cmmd=page12();
break;
case 'n':
cmmd=page13();
break;
case 'o':
cmmd=page14();
break;
case 'p':
cmmd=page15();
break;
case 'q':
cmmd=page16();
break;
case 'r':
cmmd=page17();
break;
case 's':
lasave();
endwin();
exit(0);
break;
default:
break;
}
}
}
```



```
#####
# intro function
#####
int intro()
{
    char c;
    initscr();
    crmode();
    noecho();
mvaddstr(2,0,"This is a brief evaluation regarding your views about the laser disc version");
mvaddstr(3,0,"the PORK INDUSTRY HANDBOOK (PIH) verses the original printed version of the");
mvaddstr(5,0,"This evaluation was made to mimic a printed page and most entries will be");
mvaddstr(6,0,"either the 'x' key to say yes to a statement or the spacebar to say no.");
mvaddstr(8,0,"Each entry will cause the cursor to drop down to the next statement.");
mvaddstr(10,0,"Using the 'n' key will move you on to the next page while assigning a 'no'");
mvaddstr(11,0,"all unanswered questions. A brief menu remains at the bottom of each page");
mvaddstr(12,0,"with a more complete HELP screen always available by using the 'h' key.");
mvaddstr(14,0,"Thank you very much for aiding this evaluation project with a few moments");
mvaddstr(15,0,"of your time to tell us what you think.");
mvaddstr(19,0," -----> HIT 'n' TO BEGIN THE EVALUATION <-----");
mvaddstr(22,0,"");
mvaddstr(23,0,"HELP..h")                                BEGIN EVALUATION..n                                EX
refresh();
move(19,0);
refresh();
again:
c=getch();
refresh();
if (c == 'H' || c == 'h'){
    clear();
    refresh();
    endwin();
    return(3);}
else if (c == 'n' || c == 'N'){
    clear();
    refresh();
    endwin();
    return(1);}
else if(c == 'E' || c == 'e'){
    clear();
    refresh();}
```



```
endwin();
return(5);}
else{
    goto again;}
}

/*#####
 help page function
#####
*/

int help()
{
    char c;
    initscr();
    crmode();
    noecho();
mvaddstr(0,0,"                                *** HELP MENU ***");
mvaddstr(1,0,"Following are all of the commands and their functions. An abbreviated list
mvaddstr(2,0,"of these commands also remains at the bottom of each screen.");
mvaddstr(4,0,"REVISE....(r)  This will return you to the first statement of the question
mvaddstr(5,0,"                                you are currently working on. All previous input is deleted.
mvaddstr(7,0,"NEXT.....(n)  This will move you to the next question. It will assign a `:
mvaddstr(8,0,"                                answer to all statements which are skipped.");
mvaddstr(10,0,"PREVIOUS..(p)  This will return to the previous question. The previous in
mvaddstr(11,0,"                                is deleted.");
mvaddstr(13,0,"YES.....(x)  This assigns a yes answer to the statement, places an 'x' :
mvaddstr(14,0,"                                to the statement and moves the curser down to the next sta
mvaddstr(16,0,"NO..(spacebar)  This assigns a no answer to the statement, places nothing
mvaddstr(17,0,"                                to the statement and moves the curser down to the next sta
mvaddstr(19,0,"EXIT.....(e)  This exits the evaluation (first screen or after the final
mvaddstr(20,0,"                                only). Your answers are stored only after the final questi
mvaddstr(23,0,"-----> HIT 'h' TO RETURN TO THE EVALUATION <-----");
refresh();
move(23,0);
refresh();
again:
c=getch();
refresh();
```



```
if (c == 'H' || c == 'h'){
    clear();
    refresh();
    endwin();
    return(4);}
else{
    goto again;}
}

/*#####
page2 function
#####
*/

int page2()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(0,0,"1) Which of the following categories best describes your");
    mvaddstr(1,0,"    primary occupation? (more than one may be used)");
    mvaddstr(3,0,"    a) University staff");
    mvaddstr(5,0,"    b) Extension/County agent");
    mvaddstr(7,0,"    c) Farmer/producer");
    mvaddstr(9,0,"    d) Private organization");
    mvaddstr(11,0,"    e) Library staff");
    mvaddstr(13,0,"    f) Agribusiness");
    mvaddstr(15,0,"    g) Student");
    mvaddstr(17,0,"    h) Public information specialist");
    mvaddstr(19,0,"    i) USDA administrator");
    mvaddstr(21,0,"    j) Other");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    n");
    refresh();
    cmmnd=movement(1,3,22,2,0);
    clear();
    refresh();
    endwin();
    return(cmmnd);
}.

/*#####
page3 function
#####
*/

int page3()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"2) How would you rate your micro computer skills");
    mvaddstr(3,0,"    a) Expert");
    mvaddstr(5,0,"    b) Above average");
}
```



```
mvaddstr(7,0,"____ c) Average");
mvaddstr(9,0,"____ d) Below average");
mvaddstr(11,0,"____ e) Non-existent");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne:
refresh();
cmand=movement(1,3,11,2,2);
clear();
refresh();
endwin();
return(cmand);
}

/*#####
page4 function
#####
*/

int page4()
{
    int cmand;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"3) Which types of computer equipment do you currently OWN?");
    mvaddstr(4,0,"____ a) micro computer (i.e. personal computer)");
    mvaddstr(6,0,"____ b) mini computer");
    mvaddstr(8,0,"____ c) main-frame computer");
    mvaddstr(10,0,"____ d) computer terminal (i.e. 'dumb' terminal)");
    mvaddstr(12,0,"____ e) modem");
    mvaddstr(14,0,"____ f) disk drive");
    mvaddstr(16,0,"____ g) printer");
    mvaddstr(18,0,"____ h) none");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne:
refresh();
cmand=movement(2,4,18,2,3);
clear();
refresh();
endwin();
return(cmand);
}
/*#####
page5 function
#####
*/

int page5()
{
    int cmand;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"4) Which types of computer equipment do you currently use");
    mvaddstr(2,0,"____ regularly");
    mvaddstr(5,0,"____ a) micro computer (i.e. personal computer)");
}
```



```
mvaddstr(7,0,"      b) mini computer");
mvaddstr(9,0,"      c) main-frame computer");
mvaddstr(11,0,"      d) computer terminal (i.e. 'dumb' terminal)");
mvaddstr(13,0,"      e) modem");
mvaddstr(15,0,"      f) disk drive");
mvaddstr(17,0,"      g) printer");
mvaddstr(19,0,"      h) none");
mvaddstr(22,0,"

mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(2,5,19,2,4);
clear();
refresh();
endwin();
return(cmand);
}

/*#####
page6 function
#####
*/



int page6()
{
    int cmand;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"5) Concerning available dial-up services, which ones have");
    mvaddstr(2,0,"      you used at least once?");
    mvaddstr(4,0,"      a) Commercial databases");
    mvaddstr(5,0,"          (e.g. BRS, Dialog, etc.)");
    mvaddstr(7,0,"      b) Bulletin board or electronic mail");
    mvaddstr(10,0,"      c) Commercial (e.g. Agridata network,");
    mvaddstr(11,0,"          Grassroots, The Source etc.)");
    mvaddstr(13,0,"      d) On-line programs ");
    mvaddstr(14,0,"          (e.g. Agnet, Teleplan etc.)");

    mvaddstr(16,0,"      e) None");
    mvaddstr(22,0,"

mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(2,4,16,3,5);
clear();
refresh();
endwin();
return(cmand);
}

/*#####
page7 function
#####
*/
```



```
int page7()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"6) Concerning available dial-up services, which ones do you use REGULARLY
mvaddstr(3,0," ____ a) Commercial databases");
mvaddstr(4,0," ____ (e.g. BRS, Dialog, etc.)");
mvaddstr(6,0," ____ b) Bulletin board or electronic mail");
mvaddstr(9,0," ____ c) Commercial (e.g. Agridata network,");
mvaddstr(10,0," ____ Grassroots, The Source etc.");
mvaddstr(12,0," ____ d) On-line programs ");
mvaddstr(13,0," ____ (e.g. Agnet, Teleplan etc.)");

mvaddstr(15,0," ____ e) None");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(2,3,15,3,6);
clear();
refresh();
endwin();
return(cmmnd);
}

/*#####
page8 function
#####
*/

int page8()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"7) Which of the following best describes your age group?" );
mvaddstr(3,0," ____ a) 25 years and under");
mvaddstr(5,0," ____ b) 26-50 years");
mvaddstr(7,0," ____ c) 51+ years");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(1,3,7,2,7);
clear();
refresh();
endwin();
return(cmmnd);
}
```



```
/*#####
page9 function
#####
int page9()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"8) Concerning the PORK INDUSTRY HANDBOOK (PIH printed text), check the on
mvaddstr(2,0," statement that is most true.");
mvaddstr(4,0," a) I have not seen it prior to this experience.*");
mvaddstr(6,0," b) I am familiar with it.");
mvaddstr(8,0," c) I am a subscriber.");
mvaddstr(10,0," d) I am an author/contributer.");
mvaddstr(14,10," *if you chose
mvaddstr(22,0,
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(1,4,10,2,8);
clear();
refresh();
endwin();
return(cmmnd);
}

/*#####
page10 function
#####
int page10()
{
    int cmmnd;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"9) How would you best describe your use of the PIH printed text informati
mvaddstr(3,0," a) I use it frequently.");
mvaddstr(5,0," b) I use it when I have a problem.");
mvaddstr(7,0," c) I seldom use it.");
mvaddstr(19,0," ** THIS PAGE CAN BE SKIPPED BY IMMEDIATELY USING THE 'n' KEY **")

mvaddstr(22,0,
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmmnd=movement(1,3,7,2,9);
clear();
refresh();
endwin();
return(cmmnd);
}

/*#####
```


pagell function

```
#####
int pagell()
{
    int cmand;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"10) Of these systems of information delivery, which would you say");
mvaddstr(2,0,"    is more convenient to use?");
mvaddstr(4,0,"    a) PORK INDUSTRY HANDBOOK printed text");
mvaddstr(6,0,"    b) PORK INDUSTRY HANDBOOK video laser disc version");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(1,4,6,2,10);
clear();
refresh();
endwin();
return(cmand);
}
```

```
#####
page12 function
#####

```

```
int page12()
{
    int cmand;
    initscr();
    crmode();
    noecho();
mvaddstr(1,0,"11) Which system would you say allows you to find information more");
mvaddstr(2,0,"    rapidly?");
mvaddstr(4,0,"    a) PORK INDUSTRY HANDBOOK printed text");
mvaddstr(6,0,"    b) PORK INDUSTRY HANDBOOK video laser disc version");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(1,4,6,2,11);
clear();
refresh();
endwin();
return(cmand);
}
```

```
#####
page13 function
#####

```

```
int page13()
{
    int cmand;
```



```
initscr();
crmode();
noecho();
mvaddstr(1,0,"12) If cost were not a factor, which system would you prefer to use?" );
mvaddstr(3,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
mvaddstr(5,0,"____ b) PORK INDUSTRY HANDBOOK video laser disc version");
mvaddstr(22,0,"");
mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(1,3,5,2,12);
clear();
refresh();
endwin();
return(cmand);
}

/*#####
page14 function
#####
int page14()
{
    int cmand;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"13) Which form of information presentation do you find easiest to read?" );
    mvaddstr(3,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(5,0,"____ b) PORK INDUSTRY HANDBOOK video laser disc version");
    mvaddstr(22,0,"");
    mvaddstr(23,0,"help..h    revise..r    yes..x    no..<spacebar>    previous..p    ne
refresh();
cmand=movement(1,3,5,2,13);
clear();
refresh();
endwin();
return(cmand);
}

/*#####
page15 function
#####
int page15()
{
    int cmand;
    initscr();
    crmode();
    noecho();
    mvaddstr(1,0,"14) If you had access to both systems, which one do you believe");
    mvaddstr(2,0,"____ you would use the most?" );
    mvaddstr(4,0,"____ a) PORK INDUSTRY HANDBOOK printed text");
    mvaddstr(6,0,"____ b) PORK INDUSTRY HANDBOOK video laser disc version");
    mvaddstr(22,0,"");
```



```
mvaddstr(23,0,"help..h      revise..r      yes..x      no..<spacebar>      previous..p      ne:  
refresh();  
cmmd=movement(1,4,6,2,14);  
clear();  
refresh();  
endwin();  
return(cmmd);  
}  
  
/*#####  
 pagel6 function  
#####*/  
  
int pagel6()  
{  
    int cmmd,i,j;  
    char c;  
    char state[10];  
    initscr();  
    crmode();  
    noecho();  
    mvaddstr(1,0,"15) Enter the number of the state or country in which you live.");  
    mvaddstr(3,0,"  ");  
    mvaddstr(5,0,"01-Alabama      14-Indiana      27-Nebraska      40-S. Carolina");  
    mvaddstr(6,0,"02-Alaska      15-Iowa      28-Nevada      41-S. Dakota");  
    mvaddstr(7,0,"03-Arizona      16-Kansas      29-New Hampshire      42-Tennessee");  
    mvaddstr(8,0,"04-Arkansas      17-Kentucky      30-New Jersey      43-Texas");  
    mvaddstr(9,0,"05-California      18-Louisiana      31-New Mexico      44-Utah");  
    mvaddstr(10,0,"06-Colorado      19-Maine      32-New York      45-Vermont");  
    mvaddstr(11,0,"07-Connecticut      20-Maryland      33-N. Carolina      46-Virginia");  
    mvaddstr(12,0,"08-Delaware      21-Massachusetts      34-N. Dakota      47-Washington");  
    mvaddstr(13,0,"09-Florida      22-Michigan      35-Ohio      48-W. Virginia'  
    mvaddstr(14,0,"10-Georgia      23-Minnesota      36-Oklahoma      49-Wisconsin");  
    mvaddstr(15,0,"11-Hawaii      24-Mississippi      37-Oregon      50-Wyoming");  
    mvaddstr(16,0,"12-Idaho      25-Missouri      38-Pennsylvania      51-D. of Colum  
    mvaddstr(17,0,"13-Illinois      26-Montana      39-Rhode Island      52-Other count  
    mvaddstr(22,0,"-----  
    mvaddstr(23,0,"help..h      revise..r      next..n      previ  
    refresh();  
    move(3,0);  
    refresh();
```



```
j=0;
while (j <= 1){
    c=getch();
    state[j]=c;
    addch(c);
    refresh();
    j++;}
state[j]=' ';
move(22,0);
refresh();
again:
c=getch();
refresh();
if (c == 'r' || c == 'R'){
    clear();
    refresh();
    endwin();
    return(0);}
else if (c == 'h' || c == 'H'){
    clear();
    refresh();
    endwin();
    return(3);}
else if (c == 'n' || c == 'N'){
    i=0;
    j=3;
    while ((save[15][j]=state[i]) != ' '){
        j++;
        i++;}
    clear();
    refresh();
    endwin();
    return(1);}
else if (c == 'p' || c == 'P'){
    clear();
    refresh();
    endwin();
    return(2);}
else{
    mvaddstr(22,0,"SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED
    move(22,0);
    refresh();
    goto again;}
}

/*#####
page17 function#####
#####*/
```

```
int page17()
{
    int j,i;
    char c;
```



```
char initfee[10],yearfee[10];
initscr();
crmode();
noecho();
mvaddstr(1,0,"16) To subscribe to the PIH PRINTED TEXT initially costs $25 plus $15 per
mvaddstr(2,0," for updates. With this in mind, how much would you be willing to pay f
mvaddstr(3,0," the laser disc version of the PORK INDUSTRY HANDBOOK?" );
mvaddstr(6,0,"$__ a) Initial fee");
mvaddstr(8,0,"$__ b) Yearly fee");
mvaddstr(18,0," THIS IS THE FINAL QUESTION. THANK YOU FOR YOUR EVALUATION.");
mvaddstr(19,0," -----> USE THE 'e' KEY TO EXIT <----");
mvaddstr(22,0,"

---


mvaddstr(23,0,"help..h           revise...r           previous...p           EXIT EVALUATIO

refresh();
move(6,1);
refresh();
i=0;
while (i <= 1){
    c=getch();
    initfee[i]=c;
    addch(c);
    refresh();
    i++;}
initfee[i]=' ';
move(8,1);
refresh();
i=0;
while (i <= 1){
    c=getch();
    yearfee[i]=c;
    addch(c);
    refresh();
    i++;}
yearfee[i]=' ';
move(19,6);
refresh();
again:
c=getch();
if (c == 'r' || c == 'R'){
    clear();
    refresh();
    endwin();
    return(0);}
else if (c == 'e' || c == 'E'){
    j=3;
    i=0;
```



```
    while ((save[16][j] = initfee[i]) != ' '){  
        j++;  
        i++;}  
        j=3;  
        i=0;  
        while ((save[17][j] = yearfee[i]) != ' '){  
        j++;  
        i++;}  
        clear();  
        refresh();  
        endwin();  
        return(5);}  
    else if (c == 'p' || c == 'P') {  
        clear();  
        refresh();  
        endwin();  
        return(2);}  
    else if (c == 'h' || c == 'H') {  
        clear();  
        refresh();  
        endwin();  
        return(3);}  
    else {  
        mvaddstr(22,0,"SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED  
        move(19,6);  
        refresh();  
        goto again;}  
    }  
/*##### movement function  
This function moves the cursor for most page functions and returns a command  
which tells the main program whether to go to next page or return to the  
previous page.  
#####*/
```

```
int movement(startx,starty,max,incr,row)  
    int startx,starty,max,incr,row;  
    int i,n,z;  
    char y,x,c,q,p;  
    y=' ';  
    x='x';  
    q='n';  
    p='p';  
    for(i=3;i<=16;i++){  
        save[row][i]='N';}  
        move(starty,startx);  
        refresh();  
        n=starty;  
        while (n <= (max+incr)){  
        if (n == starty){  
            z=3;}  
        else{
```



```
z=z+2;
if (row == 0 && z == 13){
    row=1;
    for(i=3;i<=16;i++){
        save[row][i]='N';
    z=3;
}
else if (row == 0 && z <=13){
    for(i=3;i<=16;i++){
        save[1][i]='N';
    }
again:
c=getch();
if (c == 'r' || c == 'R'){
    n=(max+incr)+1;
    return(0);
}
else if (c == 'h' || c == 'H'){
    return(3);
}
else if (c == ' '){
    if(n<=max){
        save[row][z]='N';
        save[row][z+1]='|';
        addch(y);
        n=n+incr;
        mvaddstr(22,0,"_____
        move(n,startx);
        refresh();
    else{
        return(1);
    }
}
else if (c == 'x' || c == 'X'){
    if(n<=max){
        save[row][z]='Y';
        save[row][z+1]='|';
        addch(x);
        mvaddstr(22,0,"_____
        n=n+incr;
        move(n,startx);
        refresh();
    else{
        return(1);
    }
}
else if (c == 'n' || c == 'N'){
    n=(max+incr)+1;
    return(1);
}
else if (c == 'p' || c == 'P'){
    n=(max+incr)+1;
    if(row==0 || row==1){
        return(0);
    else{
        return(2);
    }
}
else{
    mvaddstr(22,0,"      SORRY BUT THAT INPUT WAS INCORRECT, USE THE MENU BELOW TO PROCEED
    move(n,startx);
    refresh();
    goto again;
}
```


}

```
/*#####
  lasave function
This function saves the array (save[][]) in the file "lasans" by appending
it. This function is only called immediately before the main program is exited.
#####*/
```

```
lasave()
{
    FILE *fopen(), *fp;
    int i,j;
    fp=fopen("lasans","a");
    for(i=0;i<=18;i++){
        fprintf(fp,"%s0,save[i]);}
        fclose(fp);
        return;
    }
```


Program to Tally
Questionnaires
Appendix E


```

#include <stdio.h>
#include "states.h"
char *quest[] = {
"Which of the following categories best describes\n your primary occupation?", 
"How would you rate your micro computer skills?", 
"Which types of computer equipment do you currently OWN?", 
"Which types of computer equipment do you currently use regularly?", 
"Concerning available dial-up services, which ones\n have you used at least once.", 
"Concerning available dial-up services, which ones\n have you used or are currently us", 
"Which of the following best describes your age group?", 
"Concerning the Pork Industry Handbook (PIH text),\n check the one statement that is m", 
"How would you best describe your use of the PIH text information?", 
"Of these systems of information delivery,\n which would you say is more convenient to", 
"Which system would you say allows you to find information more rapidly?", 
"If cost were not a factor, which system would you prefer to use?", 
"Which form of information presentation do you find easiest to read?", 
"If you had access to both systems, which one do\n you believe you would use the most?", 
" Enter the number of the state or country in which you live."
};

int number [] = { 9, 4, 6, 6, 4, 4, 2, 3, 2, 1,1, 1;1, 1};

char *answer [14][10];
int state[53];
int question[16][11];
int pricel[2];
int price2[2];
int flag = 0;
main (argc, argv)
int argc;
char *argv[];
{
answer[0][0] = "a) University staff";
answer[0][1] = "b) Federal employee";
answer[0][2] = "c) Farmer/producer";
answer[0][3] = "d) Private organization ";
answer[0][4] = "e) Library staff";
answer[0][5] = "f) Agribusiness";
answer[0][6] = "g) Student";
answer[0][7] = "h) Public Information Specialist";
answer[0][8] = "i) USDA administrator";
answer[0][9] = "j) Other";
answer[1][0] = "a) Expert";
answer[1][1] = "b) Above average";
answer[1][2] = "c) Average";
answer[1][3] = "d) Below average";
answer[1][4] = "e) Non-existent";
answer[2][0] = "a) micro computer";
answer[2][1] = "b) mini computer ";
answer[2][2] = "c) main-frame computer ";
answer[2][3] = "d) modem";
answer[2][4] = "e) disk drive ";
answer[2][5] = "f) printer ";
answer[2][6] = "g) none";
answer[3][0] = "a) micro computer";
answer[3][1] = "b) mini computer ";
answer[3][2] = "c) main-frame computer ";
answer[3][3] = "d) modem";

```



```

answer[3][4] = "e) disk drive ";
answer[3][5] = "f) printer ";
answer[3][6] = "g) none";
answer[4][0] = "a) Commercial databases e.g. BRS\n Dialog, etc.";
answer[4][1] = "b) Bulletin board or electronic mail";
answer[4][2] = "c) Commercial e.g. Agidata network\n Grassroots, The Source, etc.";
answer[4][3] = "d) On-line programs e.g. Agnet,\n Telplan etc.";
answer[4][4] = "e) None";
answer[5][0] = "a) Commercial databases e.g. BRS\n Dialog, etc.";
answer[5][1] = "b) Bulletin board or electronic mail";
answer[5][2] = "c) Commercial e.g. Agidata network\n Grassroots, The Source, etc.";
answer[5][3] = "d) On-line programs e.g. Agnet,\n Telplan etc.";
answer[5][4] = "e) None";
answer[6][0] = "a) 25 years and under ";
answer[6][1] = "b) 26-50 years";
answer[6][2] = "c) 51+ years ";
answer[7][0] = "a) I have not seen it prior to";
answer[7][1] = "b) I am familiar with it. ";
answer[7][2] = "c) I am a subscriber. ";
answer[7][3] = "d) I am an author/contributer. ";
answer[8][0] = "a) I use it frequently.";
answer[8][1] = "b) I use it when I have a problem.";
answer[8][2] = "c) I seldom use it.";
answer[9][0] = "a) PIH text";
answer[9][1] = "b) Electronic Version (BRS or Laser)";
answer[10][0] = "a) PIH text";
answer[10][1] = "b) Electronic Version (BRS or Laser)";
answer[11][0] = "a) PIH text";
answer[11][1] = "b) Electronic Version (BRS or Laser)";
answer[12][0] = "a) PIH text";
answer[12][1] = "b) Electronic Version (BRS or Laser)";
answer[13][0] = "a) PIH text";
answer[13][1] = "b) Electronic Version (BRS or Laser)";

    init();
    while (argc > 1) {
        process(argv[1]);
        argc--;
        argv++;
    }
}

process(s)
char *s;
{
    FILE *fp, *fopen();
    char line [256];
    int d = 0;
    fp = fopen(s,"r");
    printf("\n\n\n\nTallies for %s\n\n",s);
    while (fgets(line,256,fp) != NULL) {
        if(line[0]=='0' || line[0] == '1') {
            d= atoi(line);
            tally(d,line);
        }
    }
    printout();
    init();
}

```



```

}

init()
{
int i,j;
    for (i=0; i<=53;i++) state[i]=0;
    for (i= 0; i<=16; i++)
        for (j=0; j <= 11; j++)
            question[i][j]=0;
    for (i=0; i<=1;i++) {
        pricel[i]=0;
        price2[i]=0;
}
}

tally(index,line)
int index;
char *line;
{
int j = 0;
int i = 0;
    if (index == 15) {
        stally(line);
        return;
    }
    if (index == 16) {
        if (dollar(line) > 0 ) {
            pricel[0] +=1;
            pricel[1] +=dollar(line);
        }
        return;
    }
    if (index == 17) {
        if (dollar(line) > 0 ) {
            price2[0] +=1;
            price2[1] +=dollar(line);
        }
        return;
    }
    if (index > 14) return;
    if (index ==1) {
        index =0;
        j =5;
    }
    if (index >1) index -=1;
again:
    if (line[i]=='\0') return;

    if (line[i]=='Y') question[index] [j++]+=1;
    if (line[i]=='N') j++;
    i++;
    goto again;
}
printout()
{
int i,j;
    for (i= 0; i<=13; i++) {
        printf("\n\n%d. %s\n\n",i+1,quest[i]);
}

```



```
        for (j= 0; j<=number[i]; j++)
            printf("%s %d\n",answer[i][j],question[i][j]);
    }
printf("\n\n15. %s\n\n",quest[14]);
    for(i=1; i<=13;i++) {
        printf("%2d. %s %2d ",i,snames[i],state[i]);
        printf("%2d. %s %2d ",i+13,snames[i+13],state[i+13]);
        printf("%2d. %s %2d ",i+26,snames[i+26],state[i+26]);
        printf("%2d. %s %2d\n",i+39,snames[i+39],state[i+39]);
    }
    printf("\n\n16. Amount you would be willing to pay\n");
    printf("\nInitial fee $%4.2f\n", (float) pricel[1]/pricel[0]);
    printf("\nYearly fee $%4.2f\n", (float) price2[1]/price2[0]);
}
stally(line)
char *line;
{
    int i,j;
    sscanf(line,"%d-%d",&i,&j);
    state[j]+=1;
}
dollar(pt)
char *pt;
{
int i;
    pt+=3;
loop:
    i=atoi(pt);
    if (i !=0 ) return(i);
    if (strlen(pt) == 1) return (0);
    pt++;
    goto loop;
}
```



```
char * snames [] = {
"Northeast",
"Alabama  ",
"Alaska   ",
"Arizona  ",
"Arkansas ",
"California",
"Colorado  ",
"Conn.    ",
"Deleware  ",
"Florida  ",
"Georgia  ",
"Hawaii   ",
"Idaho    ",
"Illinois  ",
"Indiana  ",
"Iowa     ",
"Kansas   ",
"Kentucky  ",
"Louisiana",
"Maine    ",
"Maryland  ",
"Mass.    ",
"Michigan  ",
"Minnesota",
"Miss.    ",
"Missouri  ",
"Montana  ",
"Nebraska  ",
"Nevada   ",
"N.Hamp   ",
"New Jersey",
"New Mexico",
"New York  ",
"N. Car.   ",
"N. Dakota ",
"Ohio     ",
"Oklahoma ",
"Oregon   ",
"Pa.      ",
"R. Island ",
"S. Car.   ",
"S. Dakota ",
"Tennessee",
"Texas    ",
"Utah    ",
"Vermont  ",
"Virginia ",
"Washington",
"W. Va.   ",
"Wisconsin",
"Wyoming  ",
"D. C.    ",
"Other    "
};
```


Raw Tallies
Appendix F

Tallies for BRS-totals

1. Which of the following categories best describes your primary occupation?

- a) University staff 15
- b) Federal employee 3
- c) Farmer/producer 0
- d) Private organization 1
- e) Library staff 6
- f) Agribusiness 0
- g) Student 1
- h) Public Information Specialist 3
- i) USDA administrator 1
- j) Other 1

2. How would you rate your micro computer skills?

- a) Expert 2
- b) Above average 5
- c) Average 8
- d) Below average 8
- e) Non-existent 2

3. Which types of computer equipment do you currently OWN?

- a) micro computer 10
- b) mini computer 3
- c) main-frame computer 1
- d) modem 3
- e) disk drive 8
- f) printer 11
- g) none 12

4. Which types of computer equipment do you currently use regularly?

- a) micro computer 16
- b) mini computer 4
- c) main-frame computer 4
- d) modem 8
- e) disk drive 13
- f) printer 15
- g) none 19

5. Concerning available dial-up services, which ones

have you used at least once.

- a) Commercial databases e.g. BRS
Dialog, etc. 18
- b) Bulletin board or electronic mail 11
- c) Commercial e.g. Agridata network
Grassroots, The Source, etc. 6
- d) On-line programs e.g. Agnet,
Telplan etc. 5
- e) None 4

6. Concerning available dial-up services, which ones have you used or are currently using regularly?

- a) Commercial databases e.g. BRS
Dialog, etc. 10
- b) Bulletin board or electronic mail 8
- c) Commercial e.g. Agridata network
Grassroots, The Source, etc. 0
- d) On-line programs e.g. Agnet,
Telplan etc. 2
- e) None 10

7. Which of the following best describes your age group?

- a) 25 years and under 3
- b) 26-50 years 16
- c) 51+ years 6

8. Concerning the Pork Industry Handbook (PIH text), check the one statement that is most true.

- a) I have not seen it prior to 12
- b) I am familiar with it. 10
- c) I am a subscriber. 3
- d) I am an author/contributer. 1

9. How would you best describe your use of the PIH text information?

- a) I use it frequently. 3
- b) I use it when I have a problem. 5
- c) I seldom use it. 7

10. Of these systems of information delivery, which would you say is more convenient to use?

- a) PIH text 9
- b) Electronic Version (BRS or Laser) 14

11. Which system would you say allows you to find information more rapidly?

- a) PIH text 3
- b) Electronic Version (BRS or Laser) 19

12. If cost were not a factor, which system would you prefer to use?

- a) PIH text 6
- b) Electronic Version (BRS or Laser) 17

13. Which form of information presentation do you find easiest to read?

- a) PIH text 17
- b) Electronic Version (BRS or Laser) 7

14. If you had access to both systems, which one do you believe you would use the most?

- a) PIH text 6
- b) Electronic Version (BRS or Laser) 17

15. Enter the number of the state or country in which you live.

1. Alabama	0	14. Indiana	13	27. Nebraska	0	40. S. Car.	0
2. Alaska	0	15. Iowa	0	28. Nevada	0	41. S. Dakota	0
3. Arizona	0	16. Kansas	0	29. N. Hamp	0	42. Tennessee	0
4. Arkansas	0	17. Kentucky	0	30. New Jersey	0	43. Texas	0
5. California	0	18. Louisiana	0	31. New Mexico	0	44. Utah	0
6. Colorado	0	19. Maine	0	32. New York	0	45. Vermont	0
7. Conn.	0	20. Maryland	12	33. N. Car.	0	46. Virginia	0
8. Delaware	0	21. Mass.	0	34. N. Dakota	0	47. Washington	0
9. Florida	0	22. Michigan	0	35. Ohio	0	48. W. Va.	0
10. Georgia	0	23. Minnesota	0	36. Oklahoma	0	49. Wisconsin	0
11. Hawaii	0	24. Miss.	0	37. Oregon	0	50. Wyoming	0
12. Idaho	0	25. Missouri	0	38. Pa.	0	51. D. C.	0
13. Illinois	0	26. Montana	0	39. R. Island	0	52. Other	0

16. Amount you would be willing to pay

Initial fee \$37.44

Yearly fee \$20.28

Tallies for LASER-totals

1. Which of the following categories best describes

your primary occupation?

- a) University staff 21
- b) Federal employee 3
- c) Farmer/producer 28
- d) Private organization 4
- e) Library staff 26
- f) Agribusiness 2
- g) Student 35
- h) Public Information Specialist 11
- i) USDA administrator 2
- j) Other 1

2. How would you rate your micro computer skills?

- a) Expert 7
- b) Above average 13
- c) Average 40
- d) Below average 30
- e) Non-existent 6

3. Which types of computer equipment do you currently OWN?

- a) micro computer 30
- b) mini computer 8
- c) main-frame computer 5
- d) modem 17
- e) disk drive 15
- f) printer 23
- g) none 29

4. Which types of computer equipment do you currently use regularly?

- a) micro computer 46
- b) mini computer 13
- c) main-frame computer 19
- d) modem 35
- e) disk drive 31
- f) printer 40
- g) none 47

5. Concerning available dial-up services, which ones have you used at least once.

- a) Commercial databases e.g. BRS
Dialog, etc. 43
- b) Bulletin board or electronic mail 33
- c) Commercial e.g. AgriData network
Grassroots, The Source, etc. 9
- d) On-line programs e.g. Agnet,
Telplan etc. 15
- e) None 28

6. Concerning available dial-up services, which ones have you used or are currently using regularly?

- a) Commercial databases e.g. BRS Dialog, etc. 25
- b) Bulletin board or electronic mail 19
- c) Commercial e.g. Agridata network Grassroots, The Source, etc. 4
- d) On-line programs e.g. Agnet, Telplan etc. 5
- e) None 54

7. Which of the following best describes your age group?

- a) 25 years and under 34
- b) 26-50 years 54
- c) 51+ years 8

8. Concerning the Pork Industry Handbook (PIH text), check the one statement that is most true.

- a) I have not seen it prior to 50
- b) I am familiar with it. 36
- c) I am a subscriber. 12
- d) I am an author/contributer. 5

9. How would you best describe your use of the PIH text information?

- a) I use it frequently. 9
- b) I use it when I have a problem. 23
- c) I seldom use it. 22

10. Of these systems of information delivery, which would you say is more convenient to use?

- a) PIH text 35
- b) Electronic Version (BRS or Laser) 56

11. Which system would you say allows you to find information more rapidly?

- a) PIH text 13
- b) Electronic Version (BRS or Laser) 80

12. If cost were not a factor, which system would you prefer to use?

- a) PIH text 16
- b) Electronic Version (BRS or Laser) 79

13. Which form of information presentation do you find easiest to read?

- a) PIH text 48
- b) Electronic Version (BRS or Laser) 45

14. If you had access to both systems, which one do you believe you would use the most?

- a) PIH text 16
- b) Electronic Version (BRS or Laser) 77

15. Enter the number of the state or country in which you live.

1. Alabama	0	14. Indiana	58	27. Nebraska	0	40. S. Car.	1
2. Alaska	0	15. Iowa	0	28. Nevada	0	41. S. Dakota	0
3. Arizona	0	16. Kansas	0	29. N. Hamp	0	42. Tennessee	0
4. Arkansas	0	17. Kentucky	0	30. New Jersey	0	43. Texas	0
5. California	1	18. Louisiana	0	31. New Mexico	0	44. Utah	0
6. Colorado	0	19. Maine	0	32. New York	1	45. Vermont	0
7. Conn.	0	20. Maryland	32	33. N. Car.	0	46. Virginia	0
8. Delaware	0	21. Mass.	0	34. N. Dakota	0	47. Washington	0
9. Florida	0	22. Michigan	0	35. Ohio	0	48. W. Va.	0
10. Georgia	0	23. Minnesota	0	36. Oklahoma	0	49. Wisconsin	0
11. Hawaii	0	24. Miss.	0	37. Oregon	0	50. Wyoming	0
12. Idaho	0	25. Missouri	0	38. Pa.	1	51. D. C.	1
13. Illinois	0	26. Montana	0	39. R. Island	0	52. Other	3

16. Amount you would be willing to pay

Initial fee \$44.29

Yearly fee \$25.25



